PACIFIC FISHERMAN
YEARBOOK NUMBER
1954

LIBRARY
FISH & WILDLIFE SERVICE
PACIFIC OCEANIC FISHERY
INVESTIGATIONS

MAR 22 1954

REGISTERED PROPRIETARY BRANDS

"Blossomtime"
"Columbia Rose"
"Dixie Belle"
"Far North"
"McGovern's Best"
"Princess Pat"
"Red Rider"
"Sea Beauty"
"Sea Club"
"Sea Flyer"
"Sea Legion"
"Sea Mac"
"Sea North"

MEMBERS:

National Food Brokers Association
Association of Pacific Fisheries

REFERENCE:

The National Bank of Commerce of Seattle

Reliable Service . . .

Dependable Quality!

CANNED SALMON

and other Aquatic Products

To the Packer:

we offer a ready outlet, having an efficient nationwide sales organization through which we keep in daily touch with the trade. Our sales service is augmented by regular personal visits to the markets of the nation by trained personnel.

To Our Associate Brokers:

we offer complete, reliable, up-to-the-minute postings, using the wires freely. We are in daily intimate touch with the progress of seasonal production and the trend of the market.

To the Buyer:

we offer the benefit of expert knowledge gained after years of experience in selecting stocks of all grades and sizes of ALASKA, PUGET SOUND and COLUMBIA RIVER Canned Salmon for the most discriminating trade, having sources of supply from all districts.

McGovern and McGovern

SELLING AGENTS SINCE 1917

675 COLMAN BUILDING, SEATTLE 4, WASH. **MAIN 4133**

PACIFIC FISHERMAN

YEARBOOK NUMBER 1954

2242

Periodicals
Pacific Fisherman
Yearbook
1954-'56

January 25, 1954 **Volume 52, No. 2**

DeWitt Gilbert . . . . Editor
A. W. Ponsford . . . . Associate Editor
Stuart F. Leete . . . . Associate Editor
Charles L. Shaw . . . . Associate Editor
C. L. Hillyard . . . . Advertising Mgr.

A Miller Freeman Publication

Miller Freeman . . . . President
Lawrence K. Smith . . . . Vice President
William B. Freeman . . . . Vice President
Miller Freeman, Jr. . . . . Secy.-Treasurer

Publishing Office

534 S. W. Third Ave., Portland, Ore.
BEacon 6348

Editorial & Advertising Offices

71 Columbia St., Seattle 4, Wash.
MAin 1626

370 Lexington Av., New York 17, N. Y. . MUrray Hill 3-9294
1791 Howard St., Chicago 26, Ill. . . . . . . ROgers Park 4-3420
Royal Bank Bldg., Vancouver, B. C., Canada . . . MArine 7287
815 Witmer St., Los Angeles 17, Calif. . . . . . . DUnkirk 9-1112
121 Second Street, San Francisco 5, Calif. . . . GArfield 1-5887
315 N. Avalon Blvd., Wilmington, Calif. . . . TErminal 4-4538
3518 Dante St., New Orleans 18, La. . . . . AMhurst 2762

Contents copyrighted, 1954, by Miller Freeman Publications, Incorporated, and not to be reproduced without permission of copyright owner.

SUBSCRIPTION RATES: U. S. and Canada—one year $3.00; two years $5.00; three years $7.00. Other countries — one year $4.00; two years $7.00.

CHANGE OF ADDRESS: Please send notice of change of address to 121 Second St., San Francisco 5, Calif., as early as possible and include both old and new addresses, plus zone number at new address.

ADVERTISING: Complete plates only should be sent to Pacific Fisherman, 235 N. W. Park Ave., Portland 9, Ore. . . . Advertising copy and cuts, instructions and insertion orders should be sent to the Seattle office.

PACIFIC FISHERMAN (with which is combined West Coast Fisheries). Published monthly except January when publication is semi-monthly, by Miller Freeman Publications, at 534 S. W. Third Ave., Portland 4, Ore. Application for re-entry as second class matter is pending at the post office at Portland, Ore., under Act of March 3, 1879. Postmaster, please send Notice 3579 to PACIFIC FISHERMAN, 121 Second St., San Francisco 5, California.

CONTENTS

Special Features—

Directory of Fisheries 71
Canned Fish Hand-i-Book 131

Salmon—

1953 General 81
Western Alaska 87
Central Alaska 95
Southeast Alaska 101
Puget Sound 107
Columbia River 115
British Columbia 119
Markets 125

Tuna—

Southern California 165
Pacific Northwest 185
Markets 204

Sardines 191

Mackerel 205

Shellfish 210

Halibut 219

Frozen Fish 231

Oil and Meal 247

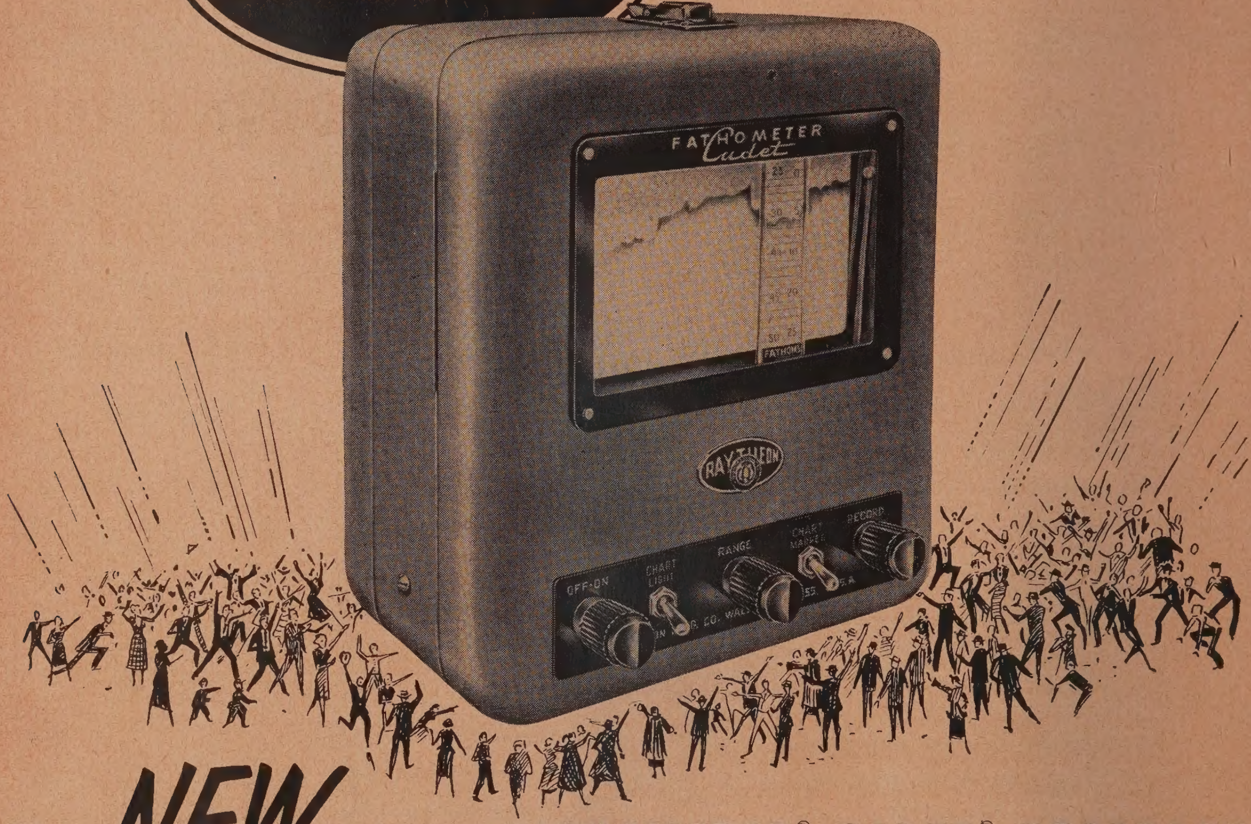
The COVER

The totem salmon swimming on the cover of this Yearbook number is reproduced from the art of the aboriginal Haidas, that seafaring tribe of Indians peculiar to Canada's Queen Charlotte Islands and the southernmost seaward islands of the Alexander Archipelago of Southeast Alaska.

The Haidas were sea-living, sea-sweeping freebooters, whose ocean dugouts harried the outer coast from Icy Strait south to the Strait of Juan de Fuca. They are fishermen to this day, modern, industrial fishermen, centering their activities at Massett, British Columbia, and Hydaburg, Alaska.

THE BIGGEST LITTLE ECHO DEPTH SOUNDER IN THE WORLD

from **RAYTHEON** *Greatest Name in Marine Electronics*



The *NEW* SUBMARINE SIGNAL FATHOMETER® CADET® RECORDER

MODEL DE-112

A big, easy-to-read chart in a compact, low-cost unit — that's Raytheon's newest achievement in echo depth sounders.

The new Fathometer Cadet Recorder gives small craft owners all the advantages and the reliability of costly instruments at a price within easy reach — plus the added advantages of extreme simplicity and saving space.

This new Cadet Recorder is one more reason why it pays to look to Raytheon for the most advanced equipment — the most profitable investment — the most complete line of marine electronic equipment.

RAYTHEON *Excellence in Electronics*

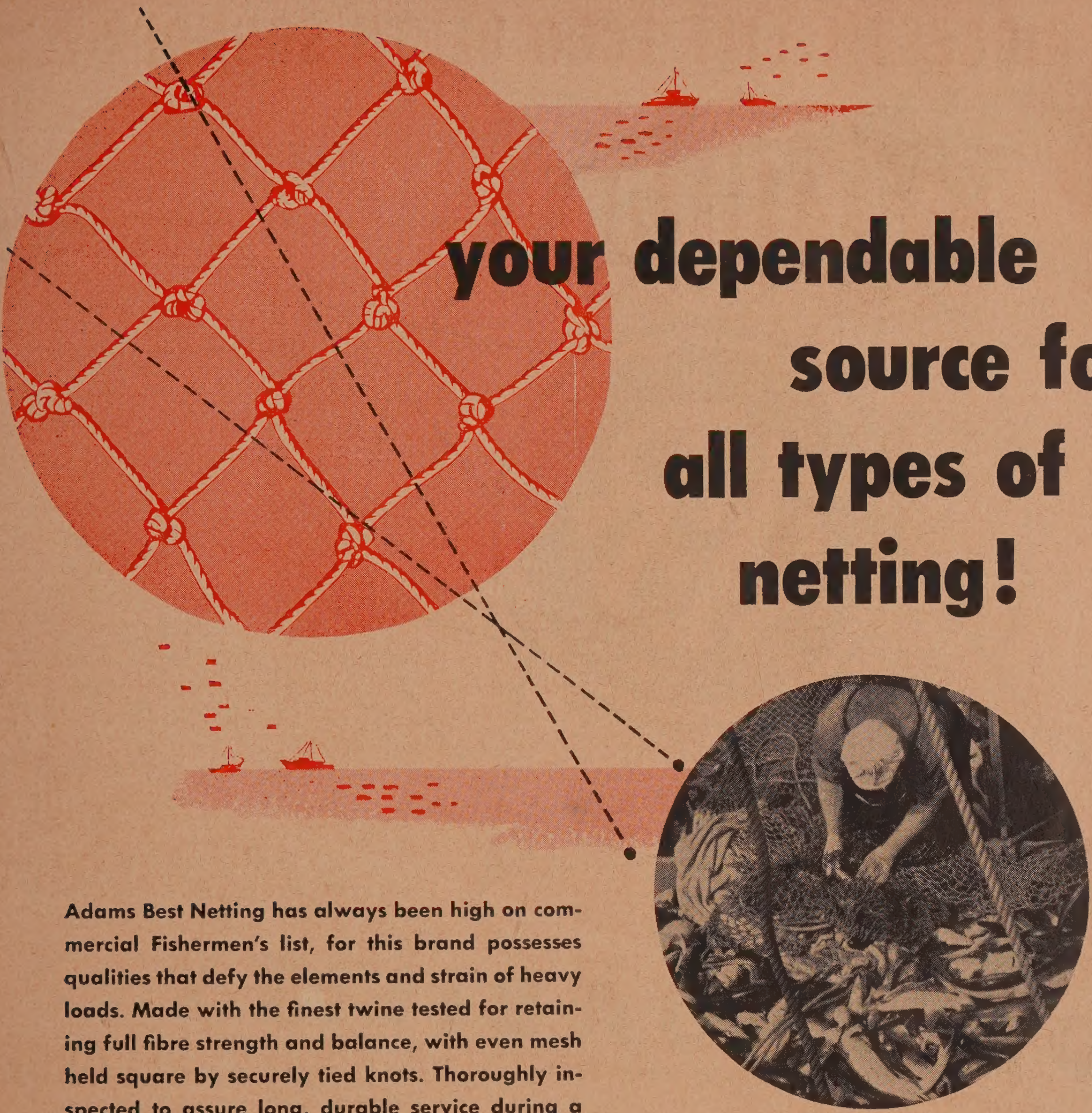
BIG IN FEATURES — SMALL IN COST

- **LARGE VIEWING WINDOW** — 6½″ x 3⅞″ window offers greater visibility and clarity of depth recordings.
- **LARGE CHART PAPER** — Unruled paper has more room for stylus marks — shows more depth detail than any other recorder.
- **LOW COST** — Economy throughout with low initial cost, small current drain, minimum maintenance, inexpensive chart paper.
- **COMPACT** — Measures only 13⅜″ x 10⅞″ x 5⁷⁄₁₆″.
- **DUAL DEPTH SCALES** — Transparent scales 0-150 ft. and 150-300 ft.; 0-50 and 50-100 fathoms. Optional and interchangeable.

SEE YOUR AUTHORIZED RAYTHEON MARINE DEALER or write for complete information. Address Dept. 6270 PN

RAYTHEON MANUFACTURING COMPANY
EQUIPMENT SALES DIVISION • WALTHAM 54, MASSACHUSETTS
District Offices: Boston, New York, Cleveland, Chicago, New Orleans
Los Angeles (Wilmington), San Francisco, Seattle
EXPORT SALES AND SERVICE
Raytheon Manufacturing Company, International Div., 19 Rector St., New York City

your dependable source for all types of netting!



Adams Best Netting has always been high on commercial Fishermen's list, for this brand possesses qualities that defy the elements and strain of heavy loads. Made with the finest twine tested for retaining full fibre strength and balance, with even mesh held square by securely tied knots. Thoroughly inspected to assure long, durable service during a busy season.

- ✓ TOP QUALITY TWINE
- ✓ EVEN MESH
- ✓ MACHINE TIED KNOTS
- ✓ UNIFORMITY
- ✓ STRENGTH

ADAMS

Nets • Twine

ADAMS' BEST

PACIFIC COAST DEALERS

SEATTLE MARINE & FISHING SUPPLY CO., Seattle, Wash.
Englund Marine Supply Co., Newport and Astoria, Ore.
A. D'Acquisto & Sons, Monterey, Calif.
Angelo D'Acquisto, San Francisco, Calif.
SEASIDE SUPPLY STORES, INC., San Pedro, Calif.
COAST EQUIPMENT COMPANY, San Diego, Calif.

ADAMS NET & TWINE DIVISION The Linen Thread Co., Inc., 701 N. 2nd St., St. Louis, Mo.

N
H&R
INC
1890

DEPENDABILITY...

. . . OUR SPECIALTY FOR OVER 60 YEARS

The Fisheries Trade turns to HANSEN & ROWLAND, INC., representing leading insurance companies and direct LLOYD'S connections. All forms of insurance written, including . . . CARGO . . HULL & MACHINERY . . PROTECTION & INDEMNITY . . PROFITS . . EMPLOYER'S LIABILITY . . WORKMEN'S COMPENSATION. World-Wide Service.

GENERAL AVERAGE ADJUSTERS

HANSEN & ROWLAND

INC.

TACOMA • SEATTLE • PORTLAND • SAN FRANCISCO • LOS ANGELES

QUALITY PRODUCTS FOR EVERY USE AT

MARINE SUPPLIES

SUNDE & d'EVERS Co.

COLMAN DOCK (PRONOUNCED SUN-DE & DE-VARE) SEATTLE, WASH.

DISTRIBUTORS FOR

- **KERMATH Marine Engines**
- **LAUSON Outboard and Inboard Motors**
- **CHAMPION Outboard Motors**
- **EXCELLO Power Mowers**
- **HAZARD, ROEBLING Trolling Strand**
- **WILCOX-CRITTENDEN Marine Hardware**
- **BIBB Porterdale Seine Twine**
- **CANADIAN WONDER Trolling Spoons**
- **TUBBS Cordage and Ropes**
- **BOSTON & LOCKPORT Blocks**
- **EDERER'S Netting**
- **EXIDE Batteries**
- **MUSTAD Hooks**
- **COLUMBIAN Propellers**
- **CROSBY Wire Rope Clips**
- **WICKS, MITTET Halibut Lines**
- **GODFREY Corrosion Collars**
- **SUDBURY AQUA-CLEAR Feeders**
- **BALTIMORE Marine Paints and Varnishes**
- **PENETONE Marine Degreasers**

—TO NAME A FEW!

Think of us for all marine needs!

MANUFACTURERS

- **TARPS, SAILS**
- **TENTS, AWNINGS**
- **HATCH COVERS**
- ***"Anything Made of Canvas"***

Dependable . . . AS THE TIDES

FOR OVER 71 YEARS
COMMERCIAL FISHERMEN
AND
CANNERY MEN
HAVE LOOKED TO SUN-d'E'S
FOR TOP QUALITY MARINE
AND FISHING SUPPLIES!

You know that quality is in a class by itself. And those of you who have dealt with us know that we pride ourselves on offering quality of merchandise and quality of service, with our aim to please you.

WHEN OUTFITTING
THINK OF SUN-d'E!

Dealers! Request a Copy
of Our New Catalog

MARINE SUPPLIES

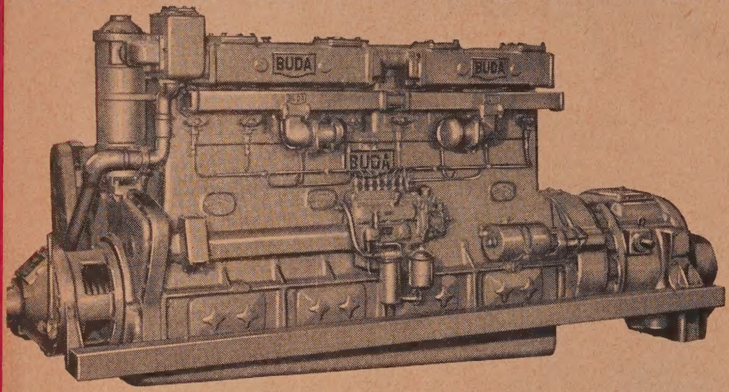
SUNDE & d'EVERS Co.

COLMAN DOCK (PRONOUNCED SUN-DE & DE-VARE) SEATTLE, WASH.

BUDA MARINE DIESE

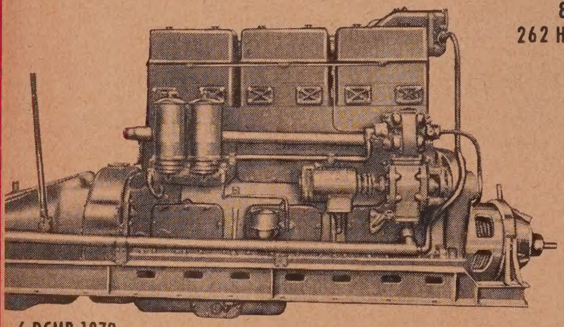
..A COMPLETE LINE...

SERVICE ROUND
THE WORL



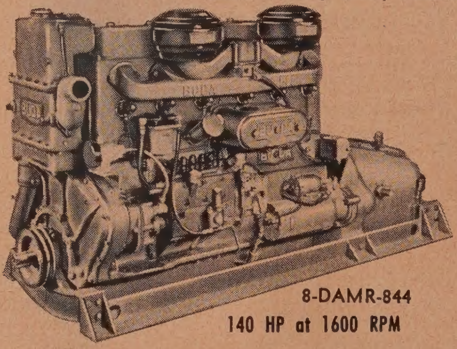
8-DCMR-2505
262 HP at 1000 RPM

Install a powerful, rugged Buda Marine sel in your boat and get the same money-mak economy and dependability that makes Buda Ma Diesels the first choice of owners and operators over the world. Remember—fast, easy starting, smo quiet, trouble-free operation and maximum fuel ec omy are guaranteed when a Buda Diesel powers y boat. Your nearby Buda Marine Distributor will glad to show you how Buda Diesels can increase y profits the first day they go to work for you. Write full details and the name of your Distributor. Buda Company, Division of Allis-Chalmers M ufacturing Co., Harvey, Illinois.



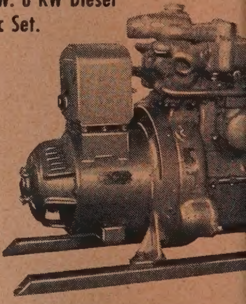
6-DCMR-1879
HP at 1000 RPM

DEPENDABLE POWER FOR EVERY NEED



8-DAMR-844
140 HP at 1600 RPM

BUDA auxiliary generator sets in sizes from 2½ to 250 KW. 6 KW Diesel Electric Set.

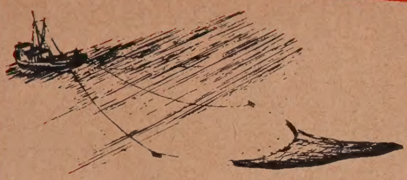


MODEL	NO. CYL.	BORE & STROKE	CU. IN. DISPL.	TUGS, FISH BOATS, COMMERCIAL CRAFT	MAX HP @
2-BDMR-77	2	3-7/16 x 4⅛	77	15 @ 1800	17 @ 200
4-BDMR-153	4	3-7/16 x 4⅛	153	32 @ 2000	40 @ 240
4-BDMR-182	4	3¾ x 4⅛	182	39 @ 2000	45 @ 240
6-BDMR-230	6	3-7/16 x 4⅛	230	48 @ 2000	60 @ 240
6-DAMR-273	6	3¾ x 4⅛	273	74 @ 2400	85 @ 280
6-DTMR-317	6	3⅝ x 5⅛	317	72 @ 2000	90 @ 240
6-DTMR-468	6	4¼ x 5½	468	92 @ 1800	114 @ 200
6-DAMR-779	6	5¼ x 6	779	142 @ 1800	185 @ 200
6-DAMR-844	6	5¼ x 6½	844	165 @ 1800	215 @ 200
6-DASMR-844*	6	5¼ x 6½	844	196 @ 1800	280 @ 210
8-DAMR-1125	8	5¼ x 6½	1125	206 @ 1800	287 @ 210
8-DASMR-1125*	8	5¼ x 6½	1125	240 @ 1800	350 @ 210
6-DCMR-1879	6	6¾ x 8¾	1879	208 @ 1200	262 @ 130
6-DCSMR-1879*	6	6¾ x 8¾	1879	265 @ 1200	340 @ 130
6-DCMR-2505	8	6¾ x 8¾	2505	296 @ 1200	388 @ 130
8-DCSMR-2505*	8	6¾ x 8¾	2505	400 @ 1200	516 @ 130

* Supercharged

BM 1

BUDA



Thousands of Shrimp Trawlers from the Florida Keys to the Gulf of Mexico are enjoying better production with the use of Ederer Trawls, considered one of the most efficient types of gear on the market.

Ederer

makes the finest COMMERCIAL FISH NETTING

The popularity of Ederer Purse Seines is due to the fact that they are constructed and designed for the particular operation required —whether Sardine, Herring, Tuna or Menhaden. Ederer Seines provide the user with assurance of durability and holding power under peak loads.

ACCURATE — UNIFORM AND DURABLE

Ederer Company offers you over 70 years of cumulative experience, with latest improvement of plant facilities, and use of raw materials of the finest quality, which provide you with netting that brings in the profitable loads regardless of the type of fishing operation. Sold by authorized Ederer Dealers who demand quality to protect your investment.

Every detail is provided in Ederer Gill Nets to gill and hold your catch. Regardless of where you fish when you have Ederer Gill Nets you can be sure of trouble free operation.

EDERER
Netting
Since 1881

PACIFIC COAST DISTRIBUTORS

C. J. HENDRY COMPANY
San Pedro San Diego
San Francisco, California

THE BEEBE COMPANY
Portland, Oregon
Astoria, Oregon

SUNDE & D'EVERS COMPANY
Seattle, Washington
Ketchikan, Alaska

Sold Only by Authorized Dealers

EDERER DIVISION
The Linen Thread Co., Inc.
540 Orleans St., Chicago, Ill.

"Johnson's Best" – Quality FIRST
Quality ALWAYS
SAY WEST COAST FISHERMEN.
RUGGED, DEPENDABLE
NEOPRENE
CLOTHING.
JOHNSON'S BEST SEATTLE WASH.
JOHNSON'S BEST SEATTLE, WASH.
LOOK FOR THIS BRAND
Your Guaranty of QUALITY

MANUFACTURED BY

George A. Johnson Company

Factory and Office
5220-24 SHILSHOLE AVE.

SEATTLE 7, WASHINGTON

Made on the West Coast—for the West Coast Since 1870

1. Port Williams
2. Wrangell
3. Seattle
4. Portland
5. Fort Bragg
6. Bodega Bay
7. Sacramento
8. San Francisco

from Alaska to California

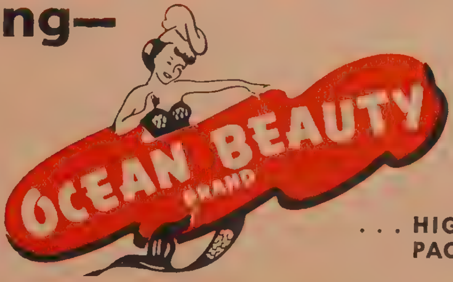
PRODUCERS and DISTRIBUTORS OF

Quality PACIFIC COAST FISH PRODUCTS

FRESH
FROZEN
SALTED
SMOKED
SHELL
CANNED

Featuring—

A CONSUMER PACKAGE LINE OF . . .


OCEAN BEAUTY
BRAND

. . . HIGHEST QUALITY PACIFIC SEAFOODS

WASHINGTON FISH and OYSTER CO., INC.
Pier 54 - Seattle, Washington

OCEAN BEAUTY SALES CO.
319 N.W. Third Avenue
Portland, Oregon

PORTLAND FISH COMPANY
301 N. W. Third Avenue
Portland, Oregon

MEREDITH FISH COMPANY
2640 Fifth Street
Sacramento, California

WASHINGTON FISH and OYSTER CO. OF CALIF.
544 Sansome St.
San Francisco, California

OWNERS AND OPERATORS OF

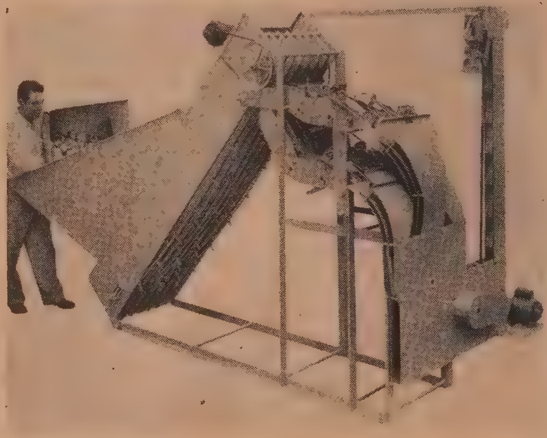
CANNERIES, COLD STORAGES and DISTRIBUTING PLANTS

MEMBER NATIONAL FISHERIES INSTITUTE, INC.

NEW...

COMPACT...

INEXPENSIVE..



New Can Unscrambler and Feeder

Capacity 700 cans per minute

Over all Dimensions

11 feet long, 7 feet high, 5 feet wide

Driven by a 1/3 hp motor

Phone, wire, or write for details

JOHN ALBERTOLI

418 Beach St.

San Francisco, Calif.

Phone: Graystone 4-8856

INCREASE YOUR PROFITS

WITH THE

SURECHO

60 FATHOM DEPTH SOUNDER

NEW LOW PRICE

Registers to 60 fathoms or 360 feet. Compact . . Rugged . . Accurate . . For safe, efficient navigation, and greater fishing profits. Write for catalog.

K-W CORSAIR COMPASS

IDEAL FOR SMALL BOATS

OVER 13,000 IN USE

Built-in corrector system Versatile mounting bracket

Special red lighting Half point card also available

SEVERAL MODELS AVAILABLE

Manufactured by WILFRID O. WHITE & SONS, INC.
BOSTON 10, MASS.

WEST COAST DISTRIBUTORS

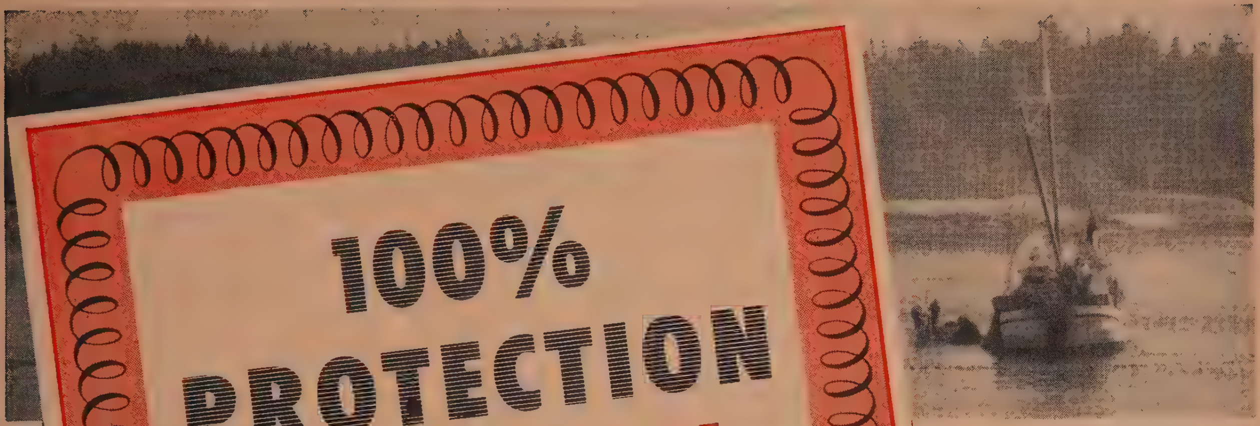
WASHINGTON and ALASKA: PACIFIC MARINE SUPPLY CO. 1223 Western Ave., Seattle

OREGON: OREGON MARINE SUPPLY CO., 235 S. W. 1st Ave., Portland

CALIFORNIA: WEEKS-HOWE-EMERSON, 255 Mission St., San Francisco 5—ETS-HOKIN & GALVAN, 551 Mission St., San Francisco—218 Avalon Blvd., Wilmington

NUTTALL-STYRIS CO., 825 Columbia St., San Diego

BRITISH COLUMBIA: EDWARD LIPSETT, LTD., 68 Water St., Vancouver



100% PROTECTION

AGAINST LOSS OF FISH GILLED!

REGISTERED

PAULS "LOCKNOT"*

* Locknot is a registered trade name for Pauls double knot netting, which is manufactured under a special patented process and sold only by the authorized dealers listed below, and should not be confused with netting of a similar name that might be sold to you as a substitute by unauthorized persons.

the best assurance against loss for gill netters

Pauls LOCKNOT Gill Netting is your assurance against loss of fish, due to Pauls famous scientifically tied knot, that will not slip, turn or saw. It positively stops loss of fish 100%. Every fish gilled stays gilled, because Pauls LOCKNOT has been perfected and proven to provide the strongest holding power without breaking, of any knot on the market. Lasts longer, requires less repair time and brings in bigger catches. Available In Nylon Salmon Twine 40/3 to 40/12 ply; also Linen Salmon Twine 40/3 to 40/14.

PAULS

Netting

PACIFIC COAST DISTRIBUTORS

Alfred Puusti & Co.,
212 Taylor Ave.,
Astoria, Oregon

F. J. Cardinalli,
Pittsburgh, Calif.

Nordby Supply Co.,
1300 Western Ave.,
Seattle, Washington

PAULS FISH NET DIVISION The Linen Thread Co., Inc., 357 W. Ohio St., Chicago, Ill.

The Most Economical Equipment

for Inverting, Labeling, Casing

Engineered by Chisholm-Ryder-New Way

JAR CLEANER

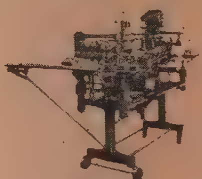
GRAVITY CASER

FEED TABLE

E LABELER

GLUER-SEALER

You can speed up operations and materially reduce your labor costs by equipping with CRCO-New Way equipment, right from the tray invertor on down through the labeler, caser and gluer-sealer. Trouble-free, high-speed, heavy-duty equipment.



V LABELER

TRAY INVERTOR

Send For
Bulletin
PF 54

The Best IN LABELING AND PACKAGING *Equipment*

Chisholm-Ryder
COMPANY OF PENNSYLVANIA
HANOVER, PENNSYLVANIA

401

BAIER FLUSH HATCH

Boat Owners Say--

IS THE BEST "SCUTTLE" THEY HAVE EVER USED

HUNDREDS have been installed on fishing boats, work boats, tugs, ferries, passenger ships, etc.

FEATURES patented watertight design. Fastest to open and close, can be opened from above or below — Safety First.

APPROVED U.S.C.G., A.B.S., Corps of Engineers, U.S.A. Specified by leading naval architects for boats all over the world.

IF YOUR LOCAL DEALER CANNOT SUPPLY YOU
WRITE, WIRE OR PHONE

L. S. BAIER & ASSOCIATES
MARINE DESIGNERS & ENGINEERS
Suite 544 Mead Bldg., Portland 4, Oregon

MARINE PRODUCTS & ENGINEERING CO.
150 Nassau St., New York 38, N. Y.

J. S. DAVIDSON—Canadian Representative
400 Ford Building, Vancouver, B. C.

M. J. GIGY & ASSOCIATES, INC.
37 California Street, San Francisco, Calif.

TOP VIEW

BOTTOM VIEW

Manufactured from

CORROSION RESISTING
BRONZE or ALUMINUM*
STOCK SIZES
20", 18", 14" and 8" ROUND
13½" x 20½" OVAL
*STEEL DECK RINGS FOR STEEL BOATS

SEE NC FOR

CATERPILLAR
Marine Diesels
Electric Sets
Diesel Power Units

BLACKHAWK
Tools, Porto Power, Jacks

BRODERICK & BASCOM
Wire Rope
Trolling Strand

CLAYTON
Steam Generators
Kerrick Cleaners

COOLIDGE
Propellers—Couplings

GOODYEAR
Industrial Rubber Products
Batteries

HALLETT
Diesel Engines
Generator Sets
Pumping Units

HYSTER
Lift Trucks

KOHLER
Electric Plants
Gasoline Engines

LINCOLN
Welders and Electrodes

McCULLOCH
Chain Saws

OLYMPIC
Propellers

RED WING
Gas Marine Engines

TWIN DISC
Marine Gear

WILLARD
Batteries

WITTE
Dieselectric Plants
Power Units

. . . AND MANY OTHER FAMOUS LINES

NCCo

Dependable Equipment— On-the-ground Service

There are sound reasons why the Pacific Fishing Industry regards Northern Commercial as the best source of machinery and equipment. Firstly, Northern Commercial offers a large but selected group of the country's most dependable machinery and supply lines. And, equally important, Northern Commercial offers many strategically located branches . . . one in Seattle and others in the North. Wherever you may be in Western Washington or Alaska, "NC" is both your closest and most reliable source of supply. This is true whether you need machinery and supplies or parts and service. Consult your nearest Northern Commercial branch for your equipment and service needs. You will find them anxious to be of help.

NORTHERN COMMERCIAL CO.

SEATTLE

NC MARINE DIVISION:
2500 Westlake N., ALder 6340
Complete dockside marine shops and showroom on Lake Union Waterfront.
HOME OFFICE: Colman Bldg., MUtual 2300

KETCHIKAN

Complete Sales and Service
Phone 9724

JUNEAU

Adjoining Small Boats Harbor, Phone 867
Complete marine shops—marine ways, machine shop, carpenter shop, welding, marine supply store, showroom, dockside petroleum service.

ANCHORAGE

733 5th Ave., Phone 35051—parts depot, complete shops.

NOME

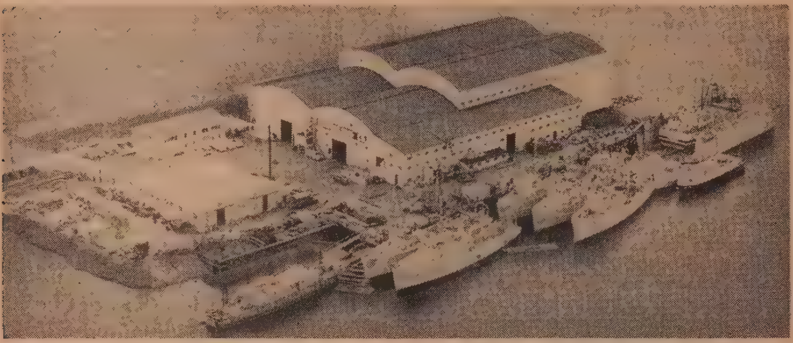
Main 22—parts and shops.

Other NCCo. Machinery Branches:

FAIRBANKS — WHITEHORSE — DAWSON

Quality BOATS *Quality* MACHINERY

From Our NEW and MODERN Yard

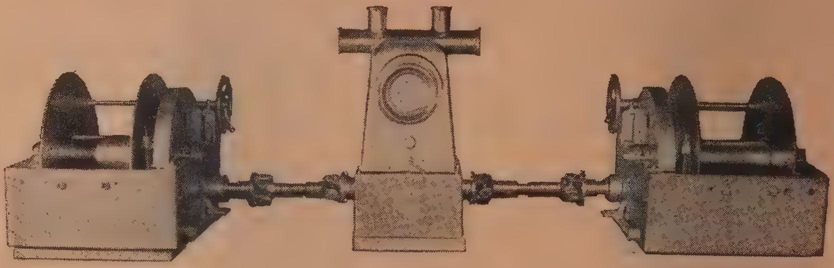


CHECK OUR FACILITIES

- √ 5 Covered Building Ways
- √ 500 Ft. Deepwater Outfitting Dock
- √ 1000 Ton Floating Drydock
- √ 35 Ton Dock Crane
- √ Machine Shop, Electric Shop Pipe Shop, Joiner Shop, Steel Shop

NORTHERN LINE DEEP DRAGGER

Capacities up to 1000 fathoms per drum.



NORTHERN BLOCKS

Ruggedly built, low priced. Northern Blocks are rapidly gaining popularity with Fishermen everywhere.

Northern PURSE SEINE BLOCK has rugged ribbed cast steel frame, pressure grease lubed—9" dia. hard alloy steel sheave.

NORTHERN ANCHOR WINCHES

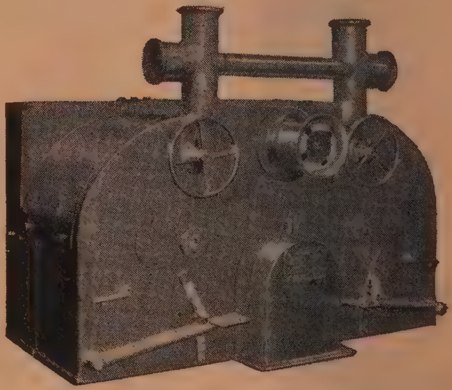
Six Basic Models
28 Types To Suit Every Need—Simple — Rugged — Dependable. The standard of quality for fishing boats 42 ft. and over.

NORTHERN SEINERS

For salmon, herring, sardine or tuna vessels.

NORTHERN DRAGGERS

For vessels 45 ft. and up.



Sturdy—Light Weight—Compact
LOW IN PRICE—AC or DC

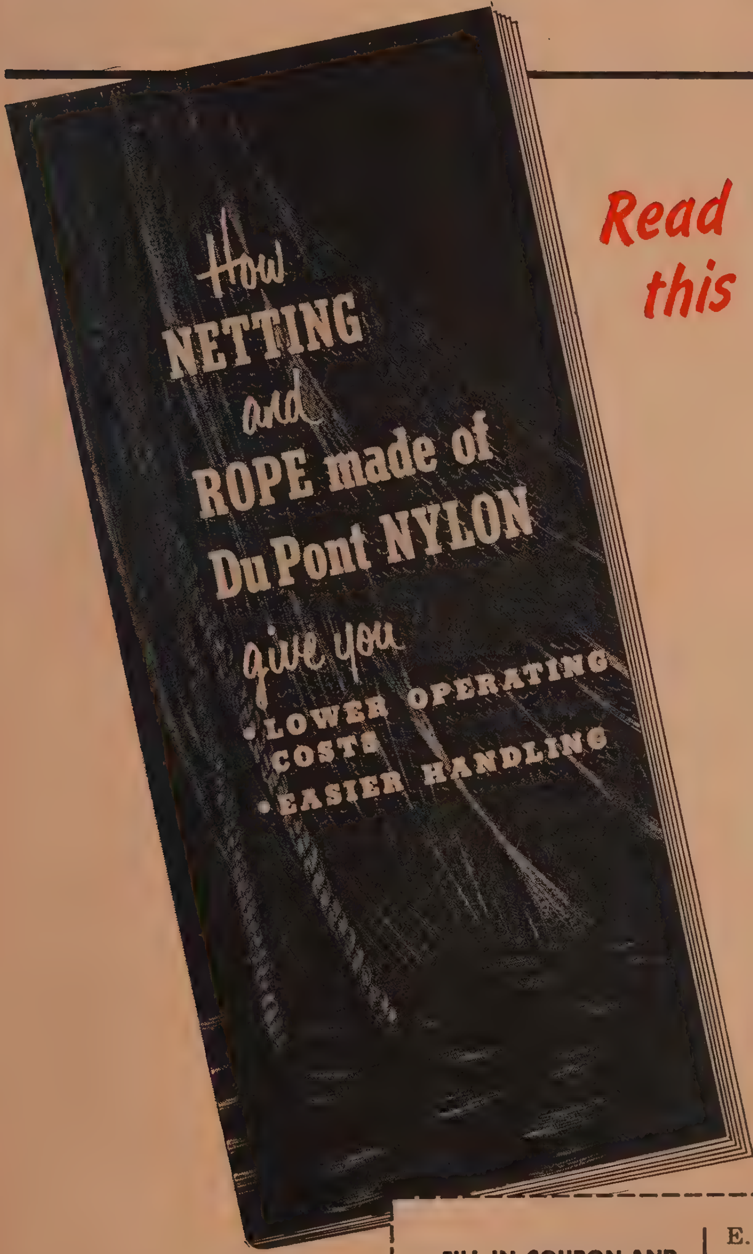
Phone, Wire or Write

TACOMA BOATBUILDING CO., INC.

132 SITCUM WATERWAY **PHONE: MARKET 8138** **TACOMA 2, WASHINGTON**

Designers and Builders of Wood and Steel Commercial and Fishing Vessels Since 1930

Reduce costs . . . lighten work with netting and rope of Du Pont nylon



Read the full story in this free new booklet!

More and more fishermen today are learning how netting and rope of Du Pont nylon help lower their operating and replacement costs . . . make their work more profitable, easier. Read this booklet to see how nylon can improve your fishing operation.

Here are a few of the advantages of nylon netting and rope which you will read about in greater detail.

1. Need no preservative
2. Last longer
3. Absorb little water
4. Need no drying
5. Weigh less

Only nylon gives you *all* these important cost-saving, work-saving advantages.

Send for your free booklet today!

FILL IN COUPON AND MAIL TODAY TO:

E. I. du Pont de Nemours & Co. (Inc.)
Advertising Dept., Room 2526-P,
Nemours Bldg., Wilmington 98, Del.

Name ____________________

Street Address ____________________

City ____________________ *State* ____________________

Netting and Rope Supplier ____________________

Watch "Cavalcade of America" on television

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

RUPERT · BRAND ·
Salmon
FILLETS
RUPERT · BRAND ·
Haddock
FILLETS
SALMON FILLETS
HADDOCK FILLETS
CANADA
BRITISH COLUMBIA
NOVA SCOTIA
U. S. A.

RUPERT BRAND

FRESH FROZEN FILLETS

With the Tang o' the Sea

Haddock, Cod and Ocean Perch caught in the North Atlantic and packed in Nova Scotia—Salmon, Sole, Halibut and others from the Pacific, fresh caught, cleaned, filleted and packed in British Columbia . . . these choice fish are favorites everywhere.

Top Quality . . . plus attractive packaging has made Rupert Brand Fresh Frozen Fillets a quick seller and a repeater.

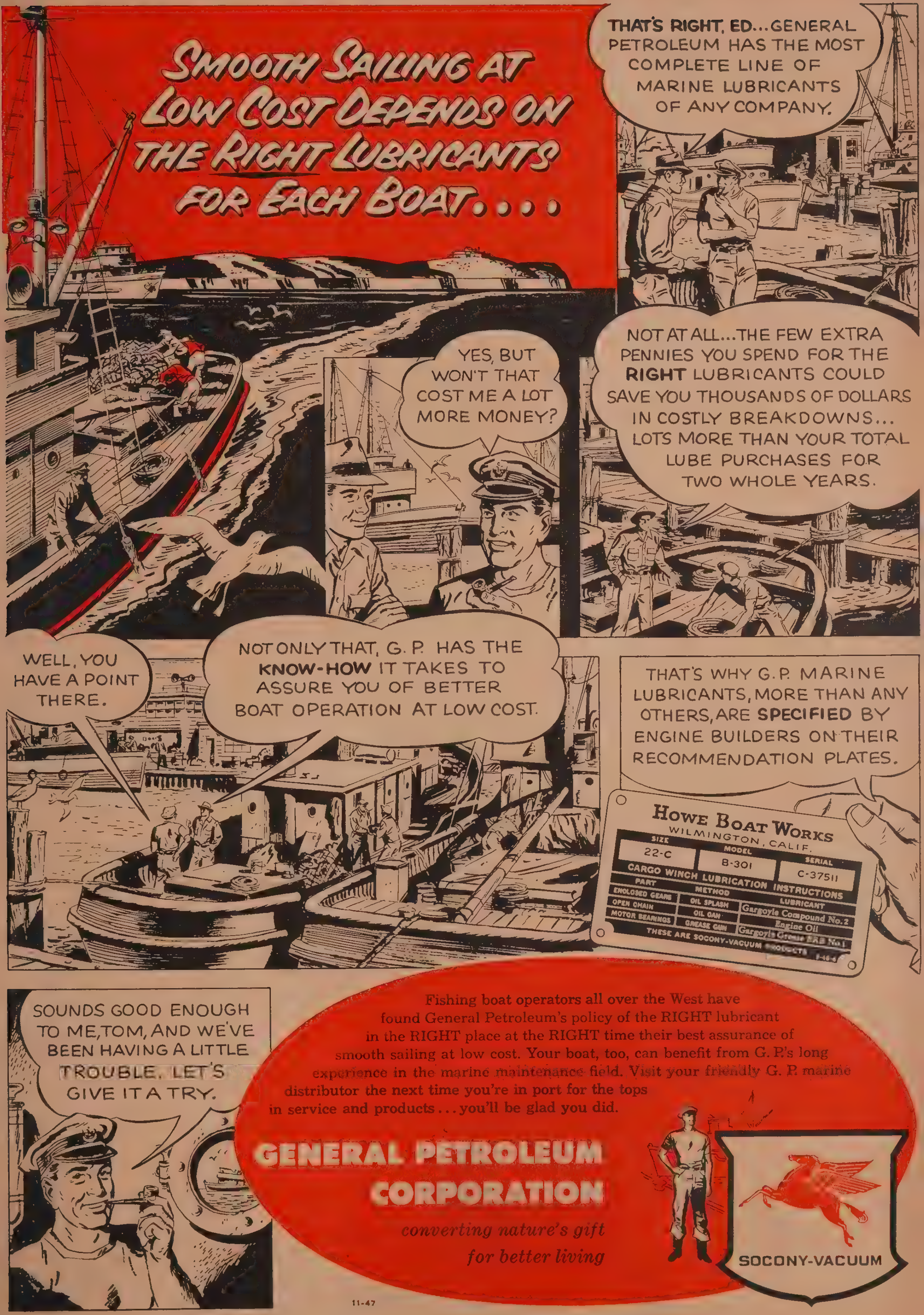
SALMON FILLETS • SOLE FILLETS • HADDOCK FILLETS
COD FILLETS • HALIBUT FILLETS • OCEAN PERCH FILLETS

PACKED BY

BRITISH COLUMBIA PACKERS LTD.

BRITISH COLUMBIA CANADA NOVA SCOTIA

R1-52


SMOOTH SAILING AT LOW COST DEPENDS ON THE RIGHT LUBRICANTS FOR EACH BOAT. . . .
THAT'S RIGHT, ED...GENERAL PETROLEUM HAS THE MOST COMPLETE LINE OF MARINE LUBRICANTS OF ANY COMPANY.
YES, BUT WON'T THAT COST ME A LOT MORE MONEY?
NOT AT ALL...THE FEW EXTRA PENNIES YOU SPEND FOR THE RIGHT LUBRICANTS COULD SAVE YOU THOUSANDS OF DOLLARS IN COSTLY BREAKDOWNS... LOTS MORE THAN YOUR TOTAL LUBE PURCHASES FOR TWO WHOLE YEARS.
WELL, YOU HAVE A POINT THERE.
NOT ONLY THAT, G. P. HAS THE KNOW-HOW IT TAKES TO ASSURE YOU OF BETTER BOAT OPERATION AT LOW COST.
THAT'S WHY G. P. MARINE LUBRICANTS, MORE THAN ANY OTHERS, ARE SPECIFIED BY ENGINE BUILDERS ON THEIR RECOMMENDATION PLATES.
HOWE BOAT WORKS
WILMINGTON, CALIF.
SIZE 22-C
MODEL B-301
SERIAL C-37511
CARGO WINCH LUBRICATION INSTRUCTIONS
PART METHOD LUBRICANT
ENCLOSED GEARS OIL SPLASH Gargoyle Compound No. 2
OPEN CHAIN OIL CAN Engine Oil
MOTOR BEARINGS GREASE GUN Gargoyle Grease BRB No. 1
THESE ARE SOCONY-VACUUM PRODUCTS
SOUNDS GOOD ENOUGH TO ME, TOM, AND WE'VE BEEN HAVING A LITTLE TROUBLE. LET'S GIVE IT A TRY.
SOCONY-VACUUM
11-47

Fishing boat operators all over the West have found General Petroleum's policy of the RIGHT lubricant in the RIGHT place at the RIGHT time their best assurance of smooth sailing at low cost. Your boat, too, can benefit from G. P.'s long experience in the marine maintenance field. Visit your friendly G. P. marine distributor the next time you're in port for the tops in service and products . . . you'll be glad you did.

GENERAL PETROLEUM CORPORATION

converting nature's gift for better living

ON THE JOB...

SERVING ALASKA'S FISHING INDUSTRY

WE salute Alaska's great fishing industry. The Alaska Line is proud of its vital part on the team—with the industry—providing the world with Alaska salmon and other famous fish products.

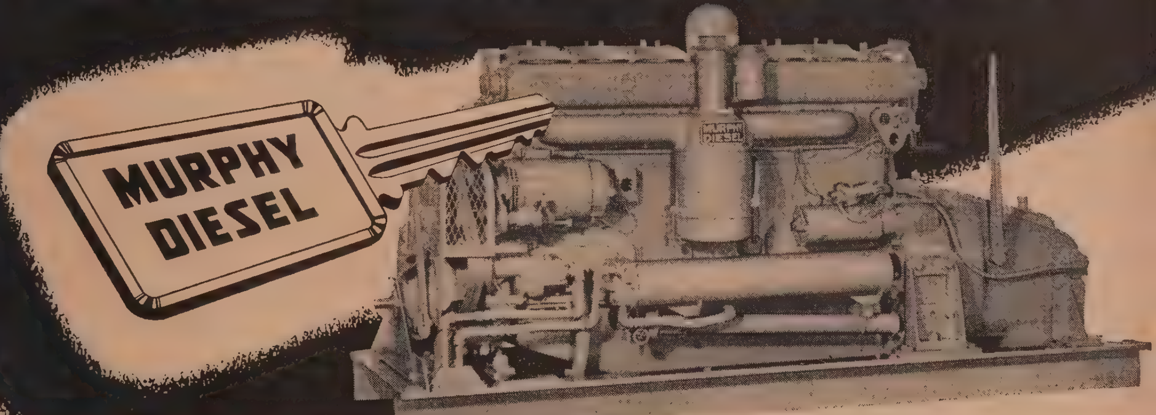
For more than fifty years the vessels of the Alaska Steamship Company have been a symbol of progress and development in every port in Alaska.

ALASKA STEAMSHIP COMPANY

"SERVING ALL ALASKA"

Here's your Key

TO MORE PROFITABLE FISHING



The "Red Wing" another Murphy powered seiner. A 57 footer, she is owned by John L. Frey of Seattle and is powered by a 190 H.P. Murphy Diesel.

269

THERE are a lot of factors that determine how profitable your fishing operations will be. Some you can control—others you can't. But you can do something about power for your boat. You can put in an engine that's dependable under all conditions, economical on fuel and maintenance, rugged and responsive when you need power in a hurry. One engine fills this bill—the Murphy Diesel.

The Murphy Diesel is built like a big diesel. It's a "true" diesel with unit fuel injection, four valves per cylinder, dual overhead camshafts and other proved design advantages. For you, they all add up to better performance, longer engine life and lower overall economy. The full story is given in the booklet *"10 Reasons Why Your Next Engine Should be a Murphy."* Ask your Murphy Diesel Dealer for a copy or write direct.

MURPHY DIESEL COMPANY

5301 W. Burnham St., Milwaukee 14, Wisconsin

Marine propulsion engines and auxiliaries, 90 to 225 H.P. marine type generator sets, 60 to 140 K.W.

MURPHY DIESEL

San Diego 1, California
Diesel Technical Service, Inc.
205 W. Market Street

San Francisco 9, California
Oswald Machine Works
2936 Hyde Street

Seattle 7, Washington
Alaska-Pacific Supply Co.
2312 Market Street

Vancouver, B. C., Canada
Northern Engine & Equipment Company
(B. C.) Ltd.
155 Walter Street

only nets made of **NYLOCK** *give you all these advantages*

- **Catch More Fish**
- **Less Knot Slippage**
- **No Preservatives, No Drying**
- **Less Care**
- **Longer Wear**
- **Easier to Handle (absorb less water)**
- **No Fraying or Fuzzing**

Fishermen say, *"Nylock Nets are sharper, rease my catch and cut down my handling cost—I can't afford NOT to use them".* ay not convince *yourself!* Write or phone one of the following manufacturers who ke nets of Patented Nylock Nylon Twine:

R. J. EDERER,
540 Orleans St., Chicago, Ill.
EDERER, INC.,
Unity and Elizabeth Sts., Philadelphia, Pa.
PAULS FISH NET CO.,
357 W. Ohio St., Chicago, Ill.
ADAMS NET & TWINE CO.,
701 N. 2nd St., St. Louis, Mo.
THE FISH NET & TWINE CO.,
310 Bergen Ave., Jersey City, N. J.
A. M. STARR NET CO.,
East Hampton, Connecticut

NY-
LOCK®

MADE FROM NYLOCK TWINE

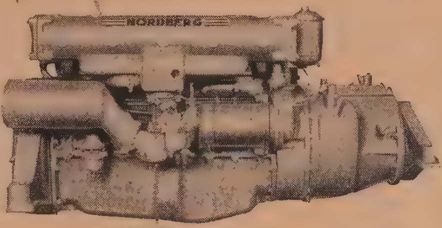
. S. Patented (No. 2590586) NYLOCK NYLON TWINE produced by **THE HEMINWAY & BARTLETT MFG. CO.,** 500
venue, New York 36, N.Y., Pacific Coast Representative: J. W. Ashley, 1940 26th Ave. North, Seattle 2, Washi

NORDBERG ENGINES POWER THEM ALL...

*N*ORDBERG *Gasoline Marine Engines have what it takes* to meet the fishing industry's demands for dependable, economical fishing vessel power. Check with any of the hundreds of fishermen who have been "shipmates" with NORDBERG engines . . . they'll tell you that you just can't beat their low cost, efficient operation.

Specify NORDBERG for powering one boat or a fleet . . . for powering new boats . . . for adding new life to older hulls.

All six NORDBERG engines—95 HP to 155 HP—are described in Bulletin 198. *Write for your copy today.*



Nordberg Gasoline Marine Engines are built in six heavy-duty 6-cylinder models . . . the **155** hp *KNIGHT*—the 130 hp *TARPON*—the 110 hp *BULLET*—the 110 hp *MARLIN*—the 95 hp *ARROW*—and the 95 hp *BLUEFIN* . . . *all* designed and built to give you the kind of performance you need for successful fishing operations.

NORDBERG MFG. CO., Milwaukee 1, Wisconsin

NORDBERG

GASOLINE MARINE ENGINES

MAIL THIS COUPON NOW

PF

NORDBERG MFG. CO., Milwaukee 1, Wis.

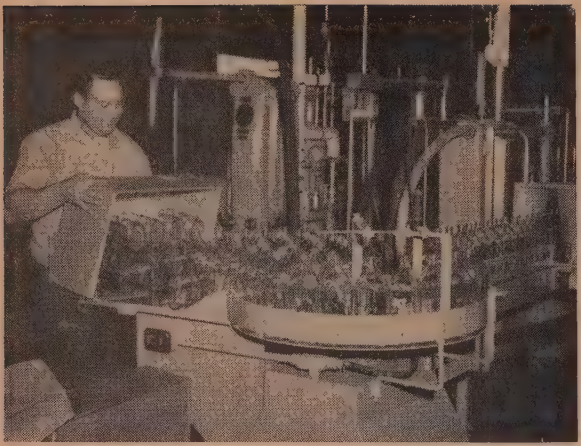
Please send literature describing Nordberg Gasoline Marine Engines.

Name ....

Address ....

City.................... Zone... State......

G853-FR

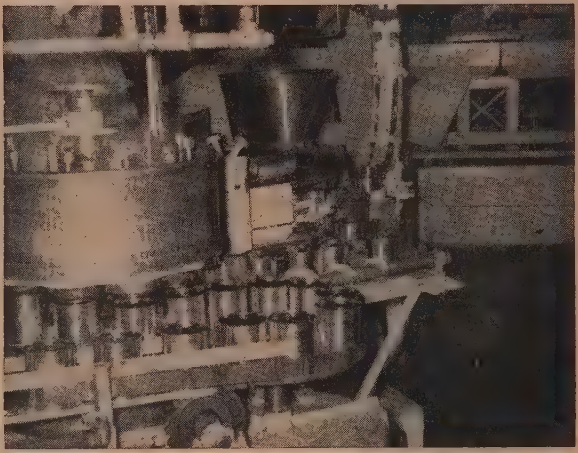


Subscribe Now to

WESTERN CANNER and PACKER

for western news — crop and pack reports — detailed packing operation features covering

CANNED
DRIED
GLASSED
FROZEN
fruits and vegetables



12 monthly issues, full of useful information and illustrated feature articles . . . plus the Yearbook number, with facts and figures on 280 food products.

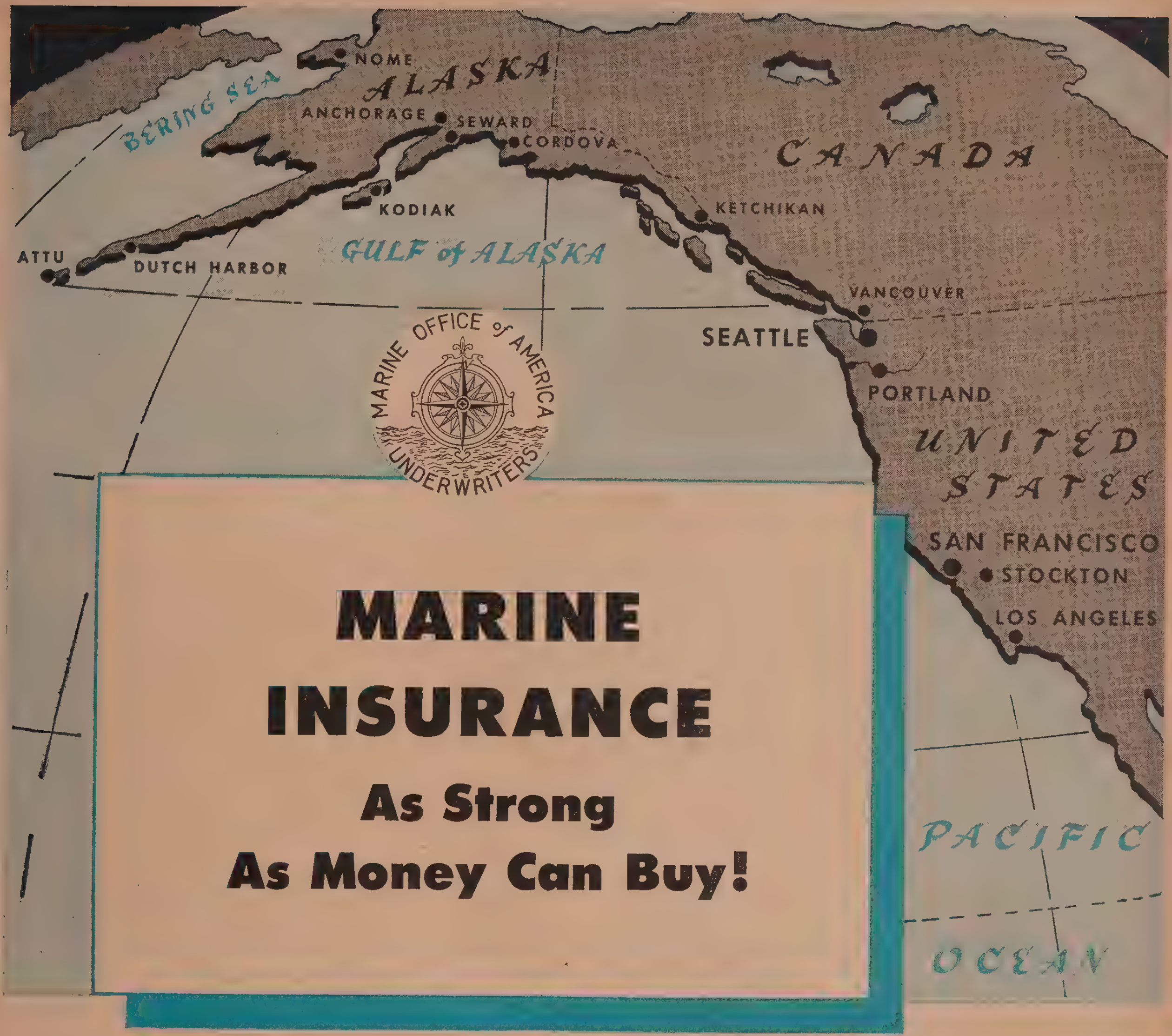
DOMESTIC SUBSCRIPTIONS: $3 for 1 year, $5 for 2 years
FOREIGN: $4 per year

WESTERN CANNER
AND PACKER
A Miller Freeman Publication

121 SECOND ST.
SAN FRANCISCO 5, CALIF.

370 LEXINGTON AVE.
NEW YORK 17, N. Y.

Vancouver ● *Seattle, Wash.* ● *Portland, Ore.* ● *Los Angeles*


BERING SEA
NOME
ALASKA
ANCHORAGE
SEWARD
CORDOVA
KODIAK
ATTU
DUTCH HARBOR
GULF of ALASKA
CANADA
KETCHIKAN
VANCOUVER
SEATTLE
PORTLAND
UNITED STATES
SAN FRANCISCO
STOCKTON
LOS ANGELES
PACIFIC
OCEAN
MARINE OFFICE of AMERICA UNDERWRITERS

MARINE INSURANCE

As Strong As Money Can Buy!

THE Marine Office of America, in good times or bad, provides sound, unquestioned, dependable Marine Insurance protection for the Salmon Industry and the West Coast Fisheries.

SOUND—because every Marine Office policy is backed by the security and strength of the seven outstanding companies listed below.

UNQUESTIONED—because of its long and distinguished record of prompt settlement of all just claims in all parts of the world.

DEPENDABLE—because of its know-how gained through decades of specialized experience in handling all classes of Marine Insurance.

This is your guarantee of sound protection—*as strong as money can buy.*

SEE YOUR LOCAL AGENT OR BROKER!

MARINE OFFICE OF AMERICA

Northwestern Department:
Paul A. Carew, Manager
Colman Building
Seattle 4, Washington

Pacific Department:
F. B. Galbreath, Manager
140 Sansome Street
San Francisco 4, California

Service Offices:
530 West Sixth Street—Los Angeles 14, California
411 Yeon Building—Portland 4, Oregon
22 North San Joaquin—Stockton 5, California

Composed of the Following Companies:

The American Insurance Company • American Eagle Fire Insurance Company • The Continental Insurance Company
Fidelity-Phenix Fire Insurance Company • Firemen's Insurance Company • Glens Falls Insurance Company
The Hanover Fire Insurance Company

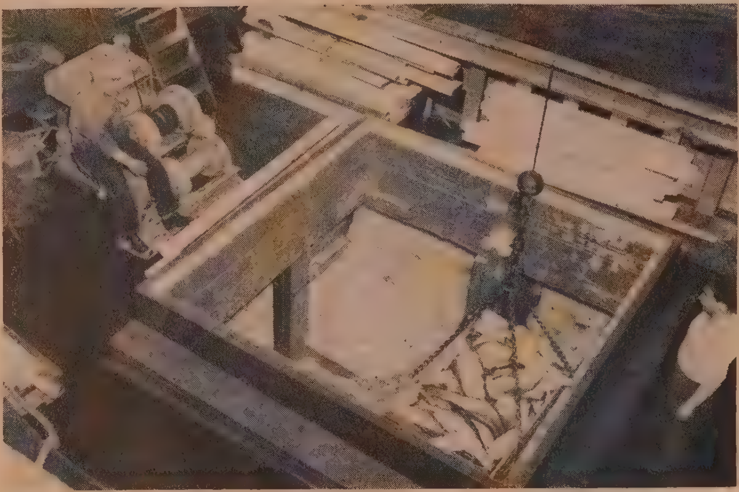
OFFICES THROUGHOUT THE UNITED STATES—CLAIMS AND SETTLING AGENTS THROUGHOUT THE WORLD

Skagit MARINE HOISTS

• Winches and Windlasses •

Hand . . . Gasoline . . . Diesel . . . Electric

BUILT TO FIT REQUIREMENTS OF THE FISHING INDUSTRY



"One of the most compact and useful units that I have ever seen" . .

That's the owner's view of this Skagit General Utility Hoist.

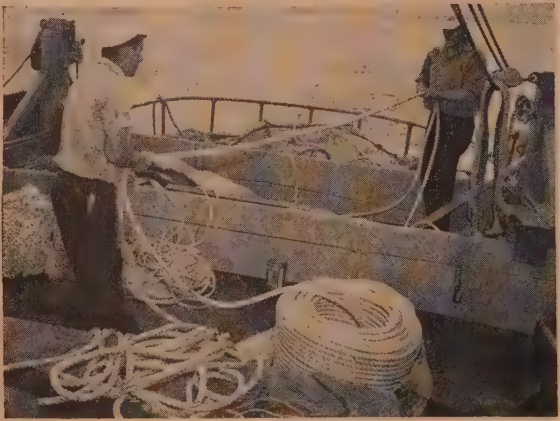
Whether you need a small, medium or large unit for your waterfront job, there is a Skagit to fit your requirements . . .

FOR COMPLETE INFORMATION CONSULT YOUR SKAGIT DEALER OR THE FACTORY

"Skagit": Trademark Reg. U. S. Patent Office

SKAGIT STEEL & IRON WORKS

Sedro-Woolley, Wash.
U. S. A.



CELEBRATING 150 YEARS OF SERVICE TO THE FISHERMAN

For fast rigging and steady dependable service look to the rope with one hundred and fifty years of unexcelled background . . . there is no substitute for the Fitler Blue and Yellow trademark of quality.

THE
EDWIN H. FITLER CO.
EST. 1804

New Orleans 17, La.
Philadelphia 24, Pa.
935 N. W. 12th Ave.
Portland 9, Oregon
1736 East 15th St.
Los Angeles 21, Calif.

FITLER
PURE MANILA ROPE

Friendly Folks...

We at the Seattle-First National Bank are proud to have so many friends in the fishing industry.

We appreciate your confidence.

Whenever you have a banking problem — from establishing a new account to financing new equipment . . . from a safe deposit box to sound business advice — our friendly, experienced people stand ready to serve you.

SEATTLE-FIRST NATIONAL BANK

Member Federal Deposit Insurance Corporation

56 OFFICES TO SERVE YOUR BANKING NEEDS

Choose the Finest Power Afloat

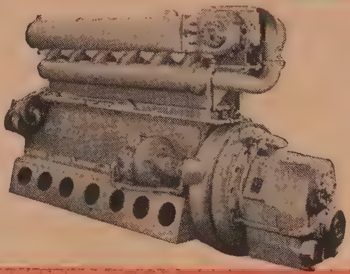
ENTERPRISE

DEPENDABLE DIESELS

Whatever your marine power requirements, you can put your confidence in Enterprise *Dependable* Diesels. Select your next engine from this complete line of expertly engineered, quality built marine diesels—the choice of power experts.

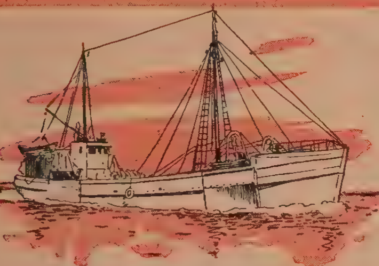
Enterprise 4-cycle marine diesels are built in 3, 4, 6 and 8 cylinder models, normally aspirated and turbocharged, from 68 to 1974 HP.

For shrimpers, fresh market boats, crabbers, Alaska limit and other small craft.



Model DMM-36
(with reverse reduction gear)

Enterprise M Series Diesels are built in 3, 4 and 6 cylinder models, 8″ bore x 10″ stroke. Turbocharging is available on 6 cylinder engine, as shown at left. Ratings in this series range from 68–400 HP at 450–800 RPM.

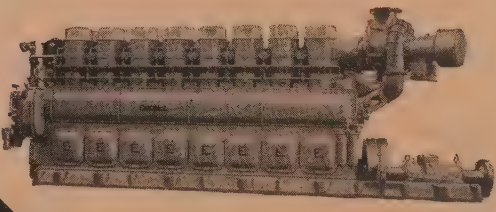


For trawlers, menhaden boats, purse seiners, cannery tenders, and other medium size craft.

Model DMG-36

Series G Diesels, in 6 and 8 cylinders, furnish powerful, heavy-duty propulsion in a wide variety of marine services. Designed with 12″ bore x 15″ stroke, this series is rated 273–1388 HP at 250–600 RPM. Turbocharging available on all models.

For draggers, tuna clippers, fishery explorers, refrigerated carriers, whalers and other larger fishing craft.

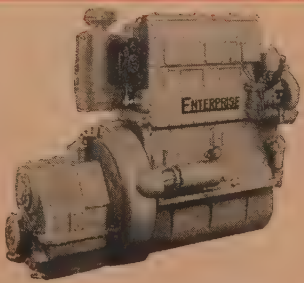


Model DMQ-38

Largest in the Enterprise line, Series Q Diesels are built in 6 and 8 cylinder models, 16″ bore x 20″ stroke, normally aspirated and turbocharged. Conservatively rated 647–2056 HP at 250–375 RPM.

Model DMM-3

Compact, with a low weight to HP ratio, the Enterprise DMM-3 shown here offers exceptional performance for main propulsion in small craft or for AC or DC electric service where required. DMM-3 is rated at 68–130 HP at 450–800 RPM. KW rating: 45 to 80 in the DSM-3.



Enterprise
DEPENDABLE
Diesels

ENTERPRISE ENGINE & MACHINERY CO.
A Subsidiary of General Metals Corporation
18th and Florida Streets, San Francisco 10, Calif.

BOSTON • CHICAGO • FT. WORTH • KANSAS CITY • LOS ANGELES • NEW ORLEANS • NEW YORK • SAN DIEGO • SEATTLE • ST. LOUIS • WASHINGTON, D. C.

total salvage...
one spyglass!

Some ninety years ago Fireman's Fund learned about marine insurance the hard way. The Company's first whaling risk was an old bark, the MASSACHUSETTS. While summer whaling off Lower California, the ship was driven ashore at Pichilingue Bay and broken up by the storm. The Captain came ashore with the total salvage under his arm—a spyglass. Until destroyed in the San Francisco Fire of 1906, this precious spyglass was on display in the Fireman's Fund marine office.

Although its marine operations became world-wide in scope, Fireman's Fund has always remained a home company to the Pacific Coast, with its hull, cargo and P. & I. underwriting and claim services unexcelled.

Whether they sail purse seiners, tuna clippers, cargo carriers, or passenger ships, men of the sea like to do business with men who know and understand the perils of the sea—they like to do business with Fireman's Fund. There is an independent agent or broker in your community representing Fireman's Fund.

MARINE DEPARTMENT

Fireman's Fund Group

Home Office: 401 California Street, San Francisco 20, California
Departmental Offices: New York • Chicago • Boston • Atlanta • Los Angeles • Seattle • Toronto
PACIFIC COAST OFFICES: SEATTLE, SPOKANE, PORTLAND, SACRAMENTO, OAKLAND, LOS ANGELES, SAN DIEGO, STOCKTON, FRESNO, VANCOUVER, B.C.

GIUSEPPINA (San Diego) – A Caterpillar D8800 Marine Engine powers this 45½′ x 15′ fishing boat, driving a 34″x 44″ wheel through 3:1 reduction gear at 8½ knots. Co-owner Sam Bompenseiro says: "For the past four years this engine has operated at full throttle. We never slow it down and it has given us no trouble whatsoever."

GIUSEPPINA

"Fishing" Engines

THE RIGHT POWER AND SIZE FOR YOUR BOAT!

WHY are Caterpillar Diesel Marine Engines often referred to as "fishing" engines? Here are some mighty good reasons. They're always ready to go. When you're out there, they leave you free to concentrate on fishing, not fixing. They're practically foolproof—even a green hand can run one. They're economical, burning low-grade, low-cost fuel without fouling, even when idling. And they don't require pampering – normal maintenance keeps them going steadily and adds extra years to their long life span.

All that, plus dockside service from your Caterpillar Dealer when needed, makes a Cat* the best buy for anyone earning his living fishing. There's one *exactly* fitted to your requirements in the complete line of propulsion engines, marine electric sets and marine power units. And remember this: you don't have to worry about the power being "all there." The horsepower and kilowatt outputs are *honestly* rated. For full information, see your nearby Caterpillar Dealer.

MODEL	PROPULSION ENGINES		ELECTRIC SETS	
	HP†	HP†††	KW††	KW†††
D397	500	400	315	280
D386	400	320	250	225
D375	335	270	210	185
D364	265	215	165	145
D337	250	170	(Available soon)	
D326	170	118	(Available soon)	
D17000	200	150	100	100
D13000	150	120	80	75
D8800	102	82	55	50
D318	100	80	60	58
D315	66	53	40	39
D311	48	38	30	27

† Intermittent output (1 hour) at maximum speed and with full equipment.
†† Rated output (12 hours) with full equipment.
††† Continuous output with full equipment. For non-stop runs, 24 hours per day, every day.

Caterpillar Tractor Co., San Leandro, Calif.; Peoria, Illinois, U.S.A.

CATERPILLAR*

*Both Cat and Caterpillar are registered trademarks—®

DIESEL MARINE
PROPULSION ENGINES
ELECTRIC SETS
POWER UNITS

KADIAK

FISHERIES COMPANY

1826 EXCHANGE BLDG.
SEATTLE 4, WASHINGTON

ALASKA CANNED SALMON

ALASKA CANNERIES

SHEARWATER and PORT BAILEY

STANDARD ENGINEER'S REPORT

DATA

LUBRICANT RPM Delo Oils

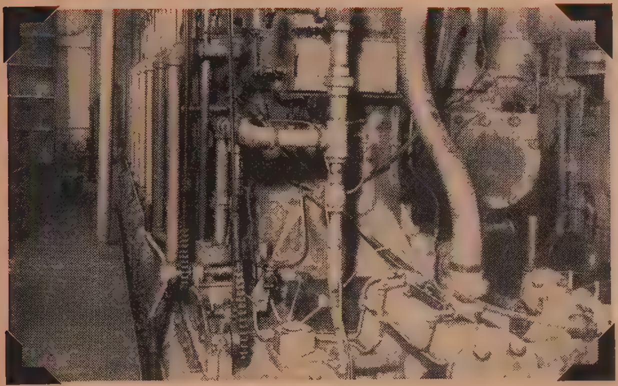
UNIT 640 H.P. dry sump diesel

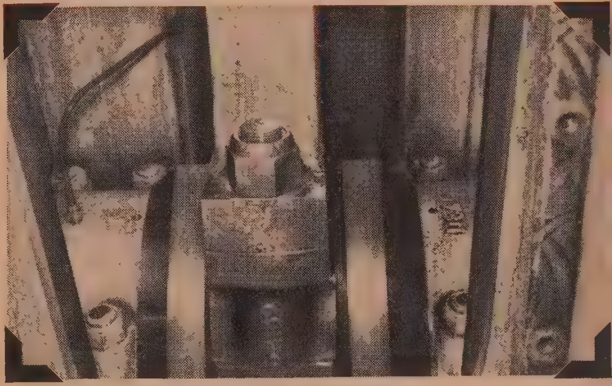
SERVICE Tuna fishing - long cruises

CONDITIONS Constant load operation - high temperature

BOAT M.V. May Queen San Diego, Calif.

Ring and deposit trouble stopped by engine-cleaning oil!

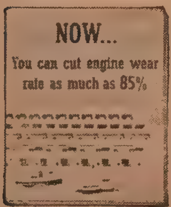




WHEN RPM DELO SPECIAL LUBRICATING OIL replaced a competitive oil in the main engine of the M. V. May Queen, ring sticking was quickly eliminated. RPM DELO Special also removed heavy carbon and lacquer deposits resulting from use of the other oil, saving needless overhaul expense. Note cleanliness of crankcase in photo above, which shows its condition immediately after completing a 78-day fishing trip. This engine works under a constant load for anywhere from twelve to fifteen hours per day.

M. V. MAY QUEEN is 121 feet long, with a 28-foot beam. She fishes off California and South America, sometimes for 70 or 80 days at a time. Her 640 H.P. engine gets a real workout in the heavy seas and tropical storms. Plane on stern is used for spotting fish.

JOAQUIN MEDINA, Chief Engineer of the May Queen, says, "RPM DELO is a perfect oil for our diesels. We've gone three years now without an overhaul. And our engines are so clean that we'll probably go at least three more before we overhaul again."



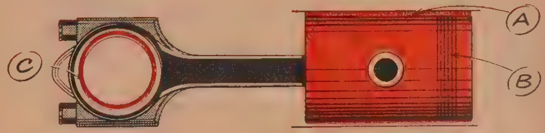
NOW...

You can cut engine wear rate as much as 85%

There is an RPM DELO Oil to meet every heavy-duty engine operating condition.

FREE BOOKLET on the RPM DELO Oils gives you complete information. Write or ask for it today.

How RPM DELO Oils keep engines clean and prevent wear



A. Contain special additives that provide metal-adhesion qualities...keep oil on parts whether they are hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean, helps prevent scuffing.

C. Special compounds stop corrosion of any bearing metal, and oil foaming in both wet and dry sump engines.

RPM DELO LUBRICATING OILS

STANDARD TECHNICAL SERVICE checked this product performance. For expert help on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write Standard Oil Company of California, 225 Bush St., San Francisco.

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA

SOME ROPES CATCH
MORE FISH

TUBBS
EXTRA SUPERIOR MANILA
CORDAGE COMPANY

Minutes and seconds count when the fish are running, so the fisherman whose boat, nets, and rope are reliable is surest to bring back a catch. (Many a haul has been lost by the delay of an ill-timed breakdown.)

Because you want dependability in the rope you buy, ask for Tubbs Extra Superior Manila. Among fishermen it's a name with an honest reputation for good service.

Tubbs Extra Superior Manila is supplied in all sizes, lays, and treatments required for commercial fishing.

TUBBS
CORDAGE COMPANY

SAN FRANCISCO
SEATTLE

fresh!

as it comes from the sea

. . . with

western waxed wrappers

Surest way to haul in more sales: bait your product with Western Waxed Paper's alluring carton overwraps. Consumers can't resist the smart, modern designs, sparkling sheen and appetizing vignettes of colorful Western frozen seafood wrappers. Western uses satin-smooth opaque stock that *protects* as it merchandises (. . . *tough* stock, too, for efficient production-line operation.)

WESTERN WAXED PAPER

DIVISION CROWN ZELLERBACH CORPORATION

SAN LEANDRO, CALIF. • Plants and Sales Offices at Los Angeles, and Portland, Ore.

76 UNION Service

FROM ALASKA TO CHILE

Fishermen who demand the finest in fuels and lubricants for their vessels put in at the sign of the "76." Here, too, they expect and get the friendliest service in any of the Pacific Ports. If you haven't tied up to one of Union's marine stations recently, do so and discover for yourself how good marine service can be.

DIESOL • 76 GASOLINE • WHITE 76 GASOLINE
TRITON, GUARDOL, T5X, UNITEC LUBRICATING OILS
UNOBA GREASES

WHITTIER
JUNEAU
KETCHIKAN
PORT ANGELES
SEATTLE
HOQUIAM
ASTORIA
COOS BAY
EUREKA
SAN FRANCISCO
SANTA BARBARA
LOS ANGELES
SAN DIEGO
PUNTARENAS
CRISTOBAL
BALBOA
VALPARAISO
76
76
76
MC
SEGUNDA

UNION OIL 76 COMPANY
OF CALIFORNIA

long-distance shrimper

"Rio Bravo"

"Gets MORE POWER for LESS MONEY"

P&H Marine Diesel Model 687-CM,
138 horsepower at 1400 r.p.m.

since repowering with P&H MARINE DIESELS 2-cycle

If you want more power while actually spending *less* for fuel, take a tip from Captain John Weisch, Port Isabel, Texas. His hard-working shrimper, "Rio Bravo," is getting it. Trip after trip, his twin 6-cylinder P&H Marine Diesels pile up the savings, put money in the bank.

Here's what he says about his P&H Diesels:

> "I get dependable performance from the two Model 687-C P&H Diesels recently installed in "Rio Bravo." When you shrimp as far away as the Campeche Bay area, you have to depend on good performance from your engines.
>
> "In using P&H Diesels, I get more power for less money and at the same time use less fuel. This saving on operating expense makes our pay loads more profitable."

P&H Marine Diesels give you every proved advancement in diesel science. They operate more efficiently because they are more efficiently designed; are far simpler, have fewer parts. They are 2-cycle, with a power impulse *every* downstroke of the piston.

You'll find P&H Diesels much easier to understand and maintain. Here's proof: The patented P&H cylinder assembly permits you to replace the head, liner, piston, and rod as one lightweight, easy-to-handle unit — *in only 40 minutes!* You don't even drop the pan.

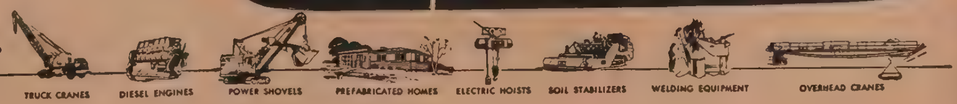
Put new profits in your fishing. Investigate P&H Marine Diesels now. Models up to 138 horsepower, 2, 3, 4, and 6 cylinders. See your P&H representative for all the facts. Or write us.

P&H DIESEL ENGINE DIVISION
HARNISCHFEGER
CORPORATION
CRYSTAL LAKE, ILLINOIS

Accessibility That Pays Off . . .

Careful designing, with all parts and accessories located in the right places for easy reaching and working, make P&H Marine Diesel engines unusually accessible. For example, each cylinder has its own injection pump. These are separate, easy to get to — you replace only the pump affected, not a big, costly unit that serves an entire engine.

the P&H Line



Keeps You Fishing

118′ Tuna Clipper "Mona Lisa" Is Cutless Bearing Equipped

If you fish for a living you know the importance of dependable propellor shaft bearings. The kind that gives years of trouble-free *quiet* operation. The kind that saves shafts and keeps boats out of drydock. That kind is CUTLESS—the soft rubber, water lubricated bearing—the bearing that fishermen depend on to keep them fishing.

Large west coast stocks of popular sizes. Factory stocks to 10-inch shaft sizes available over-night by air.

See your ship repair yard, marine supplier, or write—

LUCIAN Q. MOFFITT INC.

AKRON 8, OHIO

Engineers and National Distributors

Soft Rubber
Water Lubricated

B.F.Goodrich *Cutless* BEARINGS

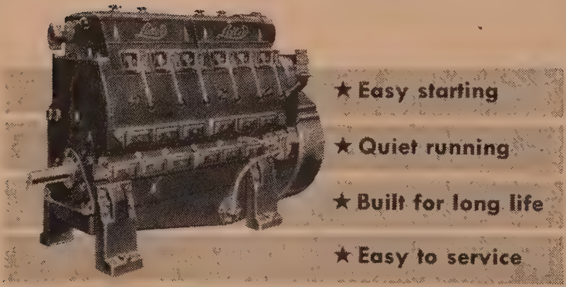
PROPELLER SHAFT

You get reliable, low-cost power

with Lister DIESELS

★1 to 6 cylinders ★9 to 54 horsepower

Specially designed for running at high speeds, Lister Diesels are:



These and many other features give you steady, economical power for your marine propulsion and auxiliary needs. For full information, write . . .

THE NATIONAL SUPPLY COMPANY

ENGINE DIVISION

SPRINGFIELD, OHIO

Distributors of Lister Diesels in the U. S. A.

AMCCO

SERVICES to the FISHERIES

- Construction
- Repair
- Conversion
- Mechanical Work

ALL CLASSES OF BOAT WORK

- Hull and Joiner
- Machine and Mechanical
- Electrical and Piping
- Refrigeration
- Competent Naval Architects

TWO 300-TON MARINE RAILWAYS
for boats up to 140 feet — 12 ft. draft
for boats up to 120 feet — 10 ft. draft
ONE 75-TON MARINE RAILWAY

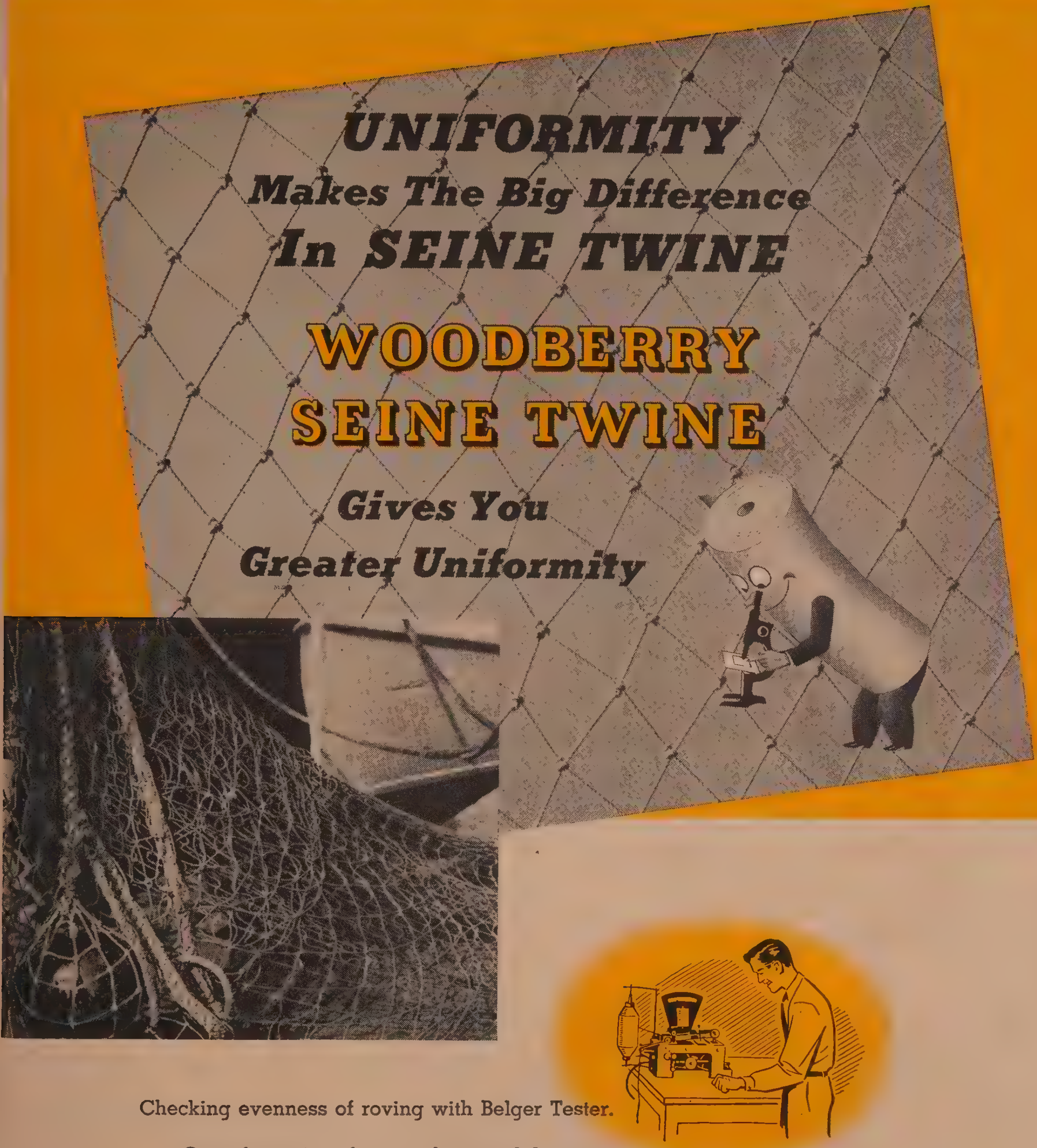
ASTORIA *Marine Construction* COMPANY

JOSEPH M. DYER, PRES. ASTORIA, OREGON

UNIFORMITY
Makes The Big Difference In SEINE TWINE

WOODBERRY SEINE TWINE

Gives You Greater Uniformity



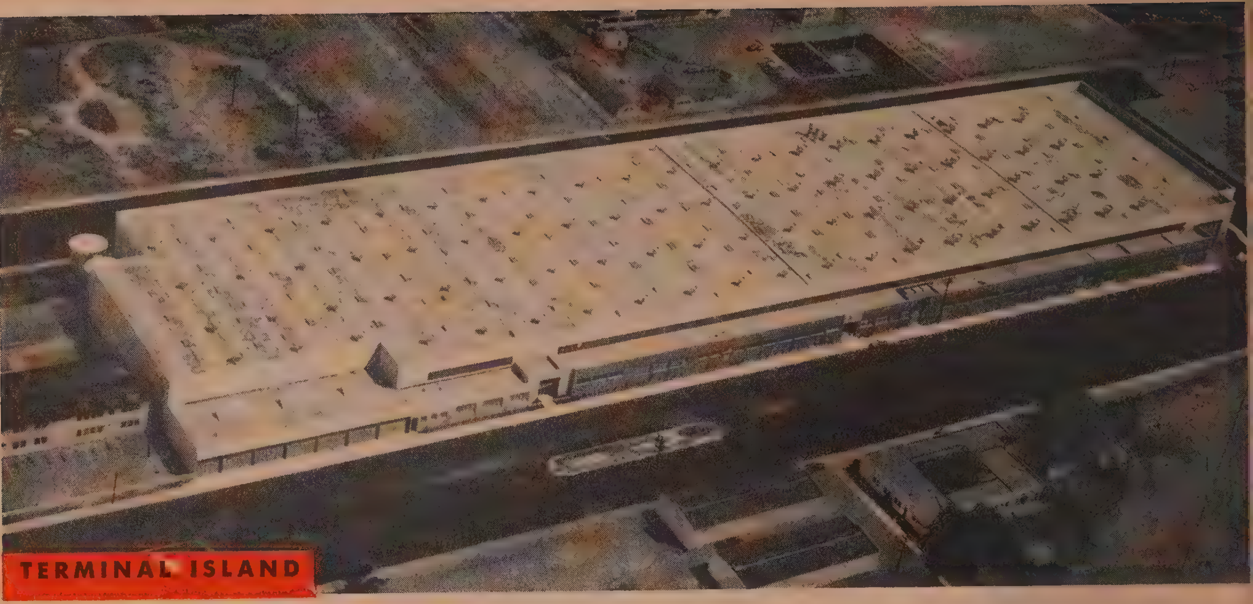
Checking evenness of roving with Belger Tester.

One of a series of comprehensive laboratory controls throughout production to assure uniformity in all Mt. Vernon-Woodberry products.

Mt. Vernon-Woodberry Mills

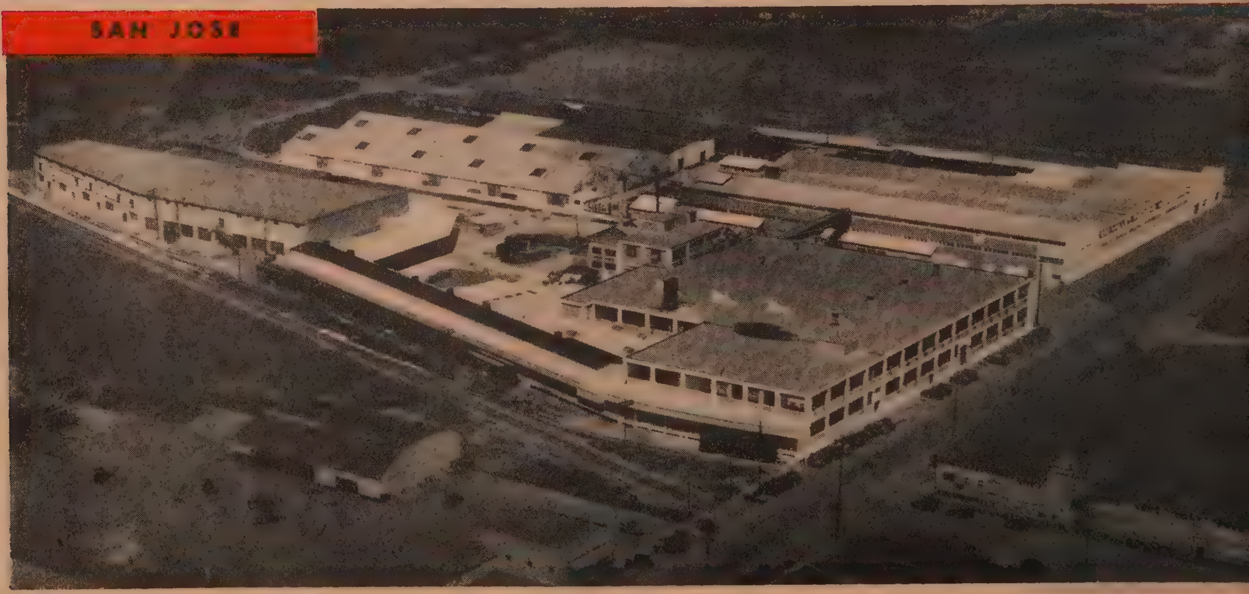
Branch Offices: Chicago • Atlanta
Baltimore • Boston • Los Angeles

TURNER HALSEY
COMPANY
Selling Agents
40 WORTH ST. · NEW YORK


TERMINAL ISLAND

Tailor-made package service
for western
fish packers

TAILOR-MADE
PACKAGE SERVICE



In working with western fish packers over the years, we have yet to find two with exactly the same problems. That is why we keep our service flexible and tailor it to fit your individual needs.

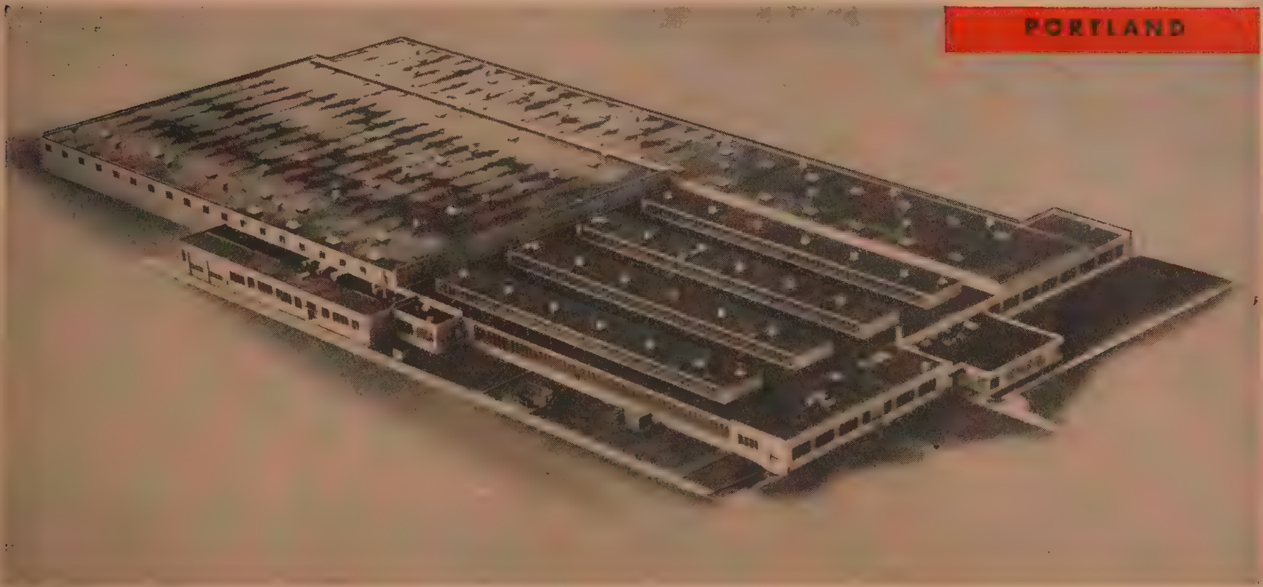
We can do this because Continental has packaging experts stationed all up and down, the Pacific coast. Four of our nine western can plants now devote all or most of their production to cans for fish packers. In addition we have three western research laboratories and two machinery service centers.

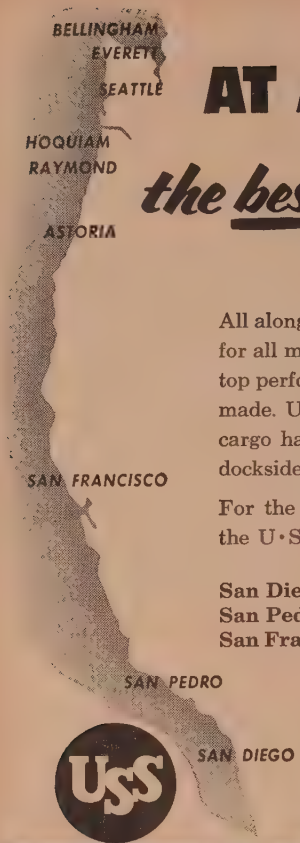
You'll find us quick to spot what's "different" about your operations — eager to do things your way. Why not give our tailor-made package service a try!

CONTINENTAL CAN COMPANY

1120 WILSHIRE BLVD:. LOS ANGELES 17 : RUSS BUILDING, SAN FRANCISCO : 10200 NO. BURGARD ST., PORTLAND

Can Plants at: Seattle, Walla Walla, Portland, Sacramento, Stockton, San Jose, Terminal Island, Los Angeles and Oakland
Machinery Service at: Hayward and Whittier
Research Laboratories at: Seattle, Hayward and Whittier





AT ALL MAJOR PORTS-

the best wire rope you can buy!

USS
AMERICAN
TIGER BRAND
WIRE ROPE
UNITED STATES STEEL

All along the coast you can get U·S·S TIGER BRAND Wire Rope for all marine uses. It comes in many designs, each engineered for top performance and long-lasting economy on the job for which it's made. U·S·S TIGER BRAND Wire Rope is your best buy for cargo handling lines, standing and running rigging, purse and trawler lines, and all other seagoing, dockside and shipyard applications.

For the U·S·S TIGER BRAND Wire Rope you need and for information, or expert advice, see the U·S·S TIGER BRAND Wire Rope distributor nearest you:

San Diego—C. J. Hendry Co.
San Pedro—C. J. Hendry Co.
San Francisco—C. J. Hendry Co.
Astoria—Fisher Bros. Co.
Raymond—F. G. Foster Co.
Hoquiam—F. G. Foster Co.
Seattle—Fisheries Supply
Seattle—Lines, Inc.
Seattle—Charles Rasmussen
Everett—Agnew Hdwe. Co.
Bellingham—Morse Hdwe. Co.

USS

U·S·S TIGER BRAND Wire Rope

Columbia-Geneva Steel Division, United States Steel Corporation, San Francisco

UNITED STATES STEEL

Want to talk business at sea?

You need good ship-shore communications to do business while at sea...and ship telephone service is the best way to be in touch with any telephone you want to call. If you'd like information on how ship-shore can serve you, just write to Pacific Telephone in your nearest large port city. We'll be glad to send you our free booklet.

Ship
Telephone Service

Pacific Telephone

TOWER'S

"FISH BRAND" NEOPRENE

There's never been a waterproof built that affords the protection that the new **TOWER'S FISH BRAND NEOPRENE** garments give fishermen. In addition to meeting the exacting needs of commercial fishermen for solid comfort, freedom of movement and durability, these waterproofs give special protection against oils, greases and ordinary acids.

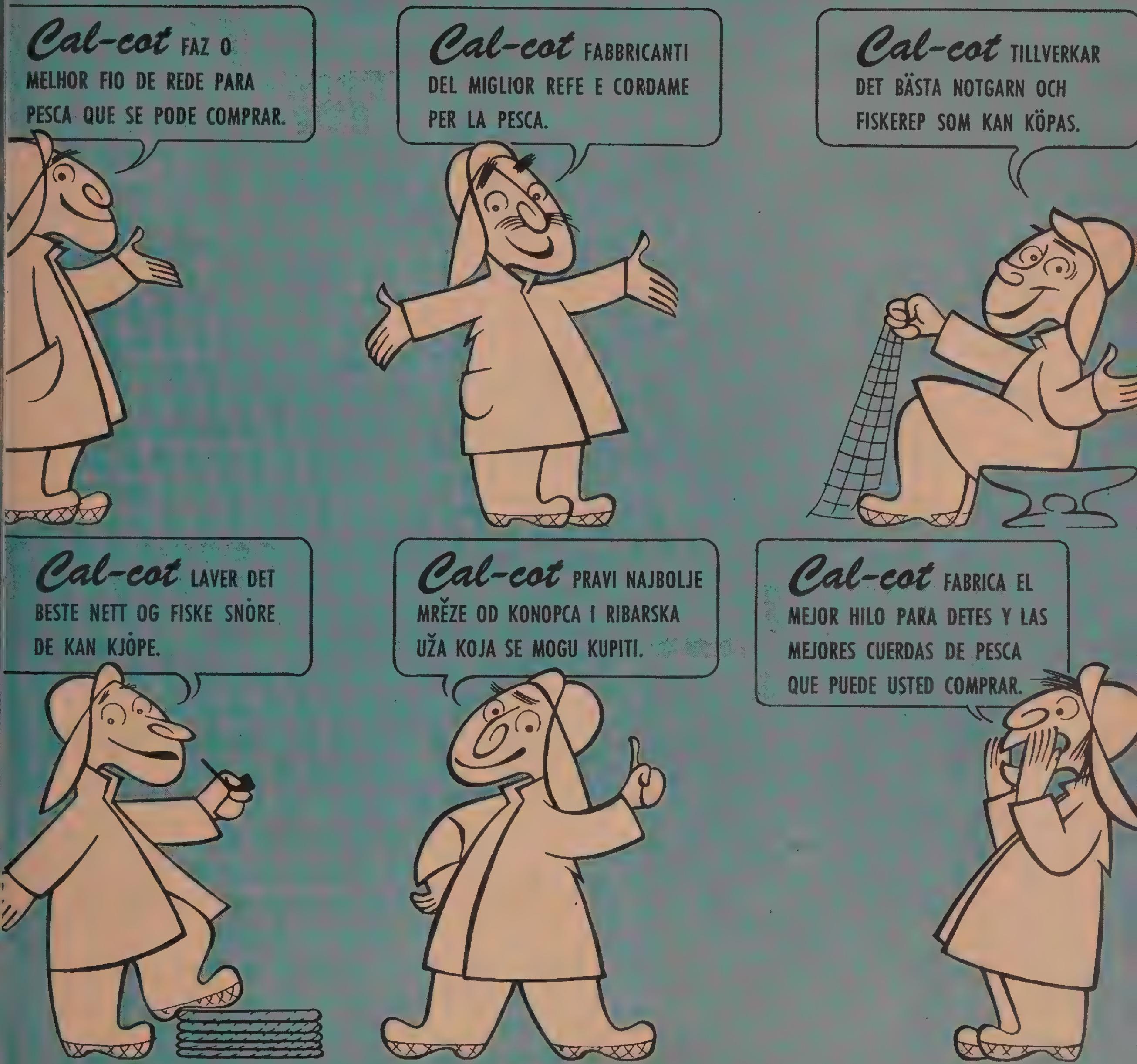
For those not needing this extra protection there are available regular **FISH BRAND** *oiled*, and **ARROW BRAND** *rubber* garments made in all styles including jackets, pants, coats, aprons and hats. All good dealers carry these items or can get them for you.

For folder of styles and detailed information write Department PF.

NEOPRENE
TOWER'S FISH BRAND

RUBBER
TOWER'S ARROW BRAND

A. J. TOWER CO.
24 SIMMONS ST., BOSTON, MASS.
45 ECKER STREET, SAN FRANCISCO, CALIF.


Cal-cot FAZ O MELHOR FIO DE REDE PARA PESCA QUE SE PODE COMPRAR.
Cal-cot FABBRICANTI DEL MIGLIOR REFE E CORDAME PER LA PESCA.
Cal-cot TILLVERKAR DET BÄSTA NOTGARN OCH FISKEREP SOM KAN KÖPAS.
Cal-cot LAVER DET BESTE NETT OG FISKE SNÖRE DE KAN KJÖPE.
Cal-cot PRAVI NAJBOLJE MRĚZE OD KONOPCA I RIBARSKA UŽA KOJA SE MOGU KUPITI.
Cal-cot FABRICA EL MEJOR HILO PARA DETES Y LAS MEJORES CUERDAS DE PESCA QUE PUEDE USTED COMPRAR.

... IN OTHER WORDS Cal-cot MAKES THE BEST SEINE TWINE AND FISHING ROPE YOU CAN BUY

REMEMBER Cal-cot MEANS CALIFORNIA COTTON MILLS

CALIFORNIA COTTON MILLS Cal-cot SOFT GREEN LABEL
CALIFORNIA COTTON MILLS Cal-cot MEDIUM BLUE LABEL
CALIFORNIA COTTON MILLS Cal-cot HARD RED LABEL

Cal-cot
SEINE TWINE and FISHING ROPE
Manufactured by—**CALIFORNIA COTTON MILLS, Division of National Automotive Fibres Inc., Oakland, California • Uniontown, Alabama**

ASTORIA—Beebe Company, 587 Bond St.

PORTLAND—Beebe Company,
504 S. W. First Ave.

SAN DIEGO—C. J. Hendry Co.
930 State Street • 2904 Canon Street

SAN FRANCISCO—C. J. Hendry Co.
27 Main Street • 496 Jefferson Street

SAN PEDRO—C. J. Hendry Co.
111-121 S. Front Street
764 Tuna Street

SEATTLE— Fisheries Supply Co., Pier 55
Fisheries Supply Co., 2412 Market

VANCOUVER, B. C.
Canada Net and Twine Ltd., 808 Powell Street
Western Marine Supply Ltd., 558 Powell Street

Longfibre

SALES OFFICES

Portland, Oregon
Longview, Washington
Seattle, Washington

Oakland, California
Los Angeles, California
San Francisco, California

CONTAINER FACTORIES

Longview, Washington
Los Angeles 54, California
Oakland 21, California

Kraft
Corrugated
Shipping
Containers

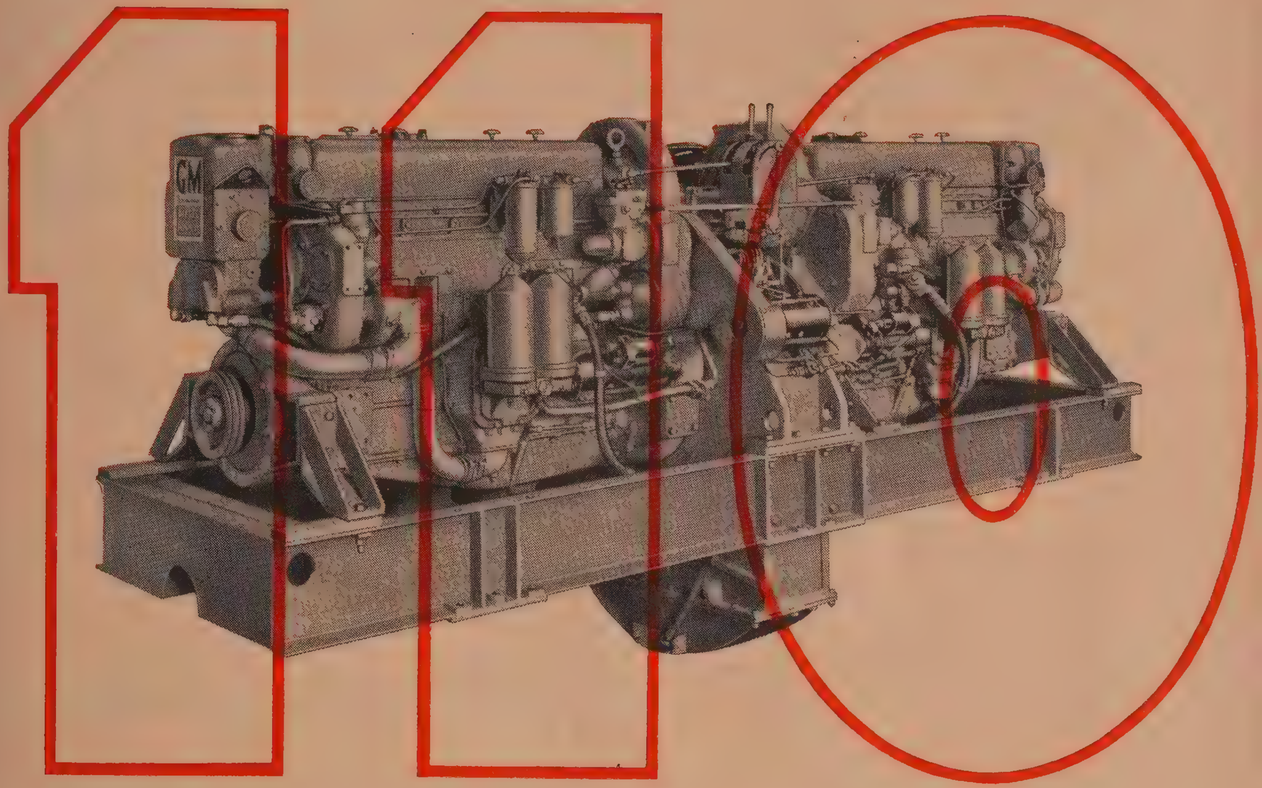
for

Salmon
Oysters
Tuna
Mackerel
Sardines

Longview Fibre Company

Main Office and Mill
Longview, Washington

NOW—A NEW 409—530 S.H.P. GENERAL MOTORS DIESEL



The "110" Tandem Twin

- ★ ***409 Continuous Shaft Horsepower***
- ★ ***20% to 40% Lower Cost***
- ★ ***Twin Engine Dependability***
- ★ ***Clean, Compact Lines—Lighter Weight***

Meet the newest member of the General Motors Marine Diesel family—the power-packed "110" Tandem Twin.

Now you can have the *double dependability* of a more powerful GM Diesel Twin—530 horsepower for pleasure craft—a full 409 horsepower at the shaft for round-the-clock, heavy-duty work in tugs and fishing boats.

Like all GM Diesels, this new "110" Twin operates on the *2-cycle* principle—delivers smoother, steadier, more responsive power. It's more flexible, too, because you can shut off one of the engines when not needed. One engine running alone will propel a single-screw boat at 80% of its normal speed.

The slim, low silhouette of its tandem arrangement lets this unit fit in a smaller engine room, leaves more room, more space for fuel and pay load. And its clean, simple design, with ready accessibility for servicing, means easier, lower-cost maintenance. Its parts cost much less too.

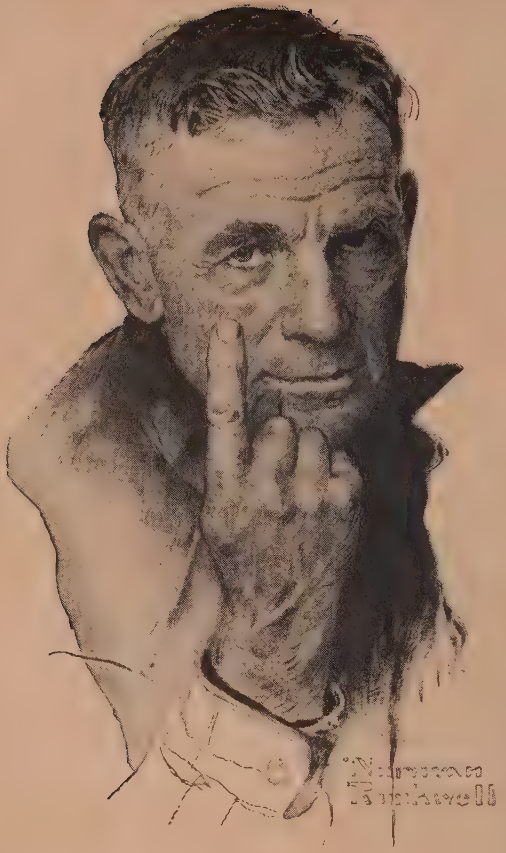
But the big news is its low price. Here's a reserve of GM's time-proved Diesel power in a compact, lightweight marine unit that gives you the extra dependability and safety of twin engine operation—all at a price that's 20% to 40% less than any other Diesel of comparable power.

The new "110" Tandem Twin is available with port or starboard rotation; finger-tip GM hydraulic reversing; reduction gears up to 6:1; front power take-off for either engine and push-button electric starting. Your local GM Diesel distributor will gladly give you full details. Call him today, or write us for complete specifications.

Single Engines . . . 16 to 275 H.P. Multiple Units . . . Up to 840 H.P.

GM
GENERAL MOTORS
DIESEL
POWER

DETROIT DIESEL
ENGINE DIVISION
GENERAL MOTORS • DETROIT 28, MICHIGAN



"There's only ONE reason!"

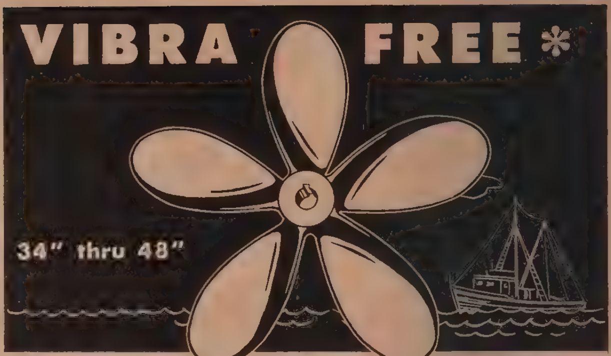
IT'S JUST THAT SIMPLE. There's only one reason in the world why so many commercial fishermen prefer Roebling wire rope...*it costs a lot less on the job than any other.*

For maximum wire rope efficiency and economy, call your nearest Roebling office for a Field Man. He'll recommend the best ropes for your type of fishing.

ROEBLING
WIRE ROPE
TRENTON N.J.

ROEBLING CF&I
A subsidiary of The Colorado Fuel and Iron Corporation

JOHN A. ROEBLING'S SONS CORPORATION, TRENTON 2, N. J. BRANCHES: ATLANTA, 934 AVON AVE. • BOSTON, 51 SLEEPER ST. • CHICAGO, 5525 W. ROOSEVELT RD. • CINCINNATI, 3253 FREDONIA AVE. • CLEVELAND, 13225 LAKEWOOD HEIGHTS BLVD. • DENVER, 4801 JACKSON ST. • DETROIT, 915 FISHER BLDG. • HOUSTON, 6216 NAVIGATION BLVD. • LOS ANGELES, 5340 E. HARBOR ST. • NEW YORK, 19 RECTOR ST. • ODESSA, TEXAS, 1920 E. 2ND ST. • PHILADELPHIA, 230 VINE ST. • SAN FRANCISCO, 1740 17TH ST. • SEATTLE, 900 1ST AVE. S. • TULSA, 321 N. CHEYENNE ST. • EXPORT SALES OFFICE, TRENTON 2, N.J.

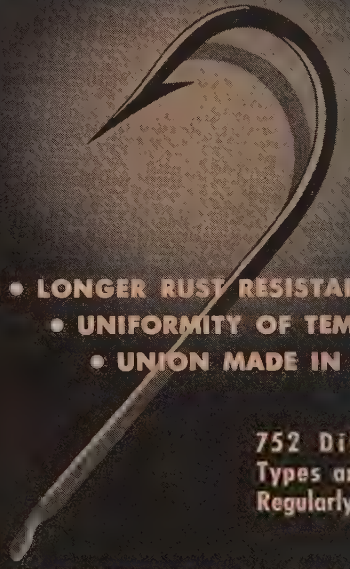


*** A POSITIVE CORRECTIVE FOR VESSELS WITH ABNORMAL VIBRATION!**

If you want to get rid of the excessive vibration that ruins nerves as well as hull and fittings, here's the way to do so completely . . . change to the new, thoroughly proven FEDERAL "VIBRA-FREE" 5-blade wheel. And, as a bonus, you will get considerably more speed and greater fuel economy. Requires no change in R.P.M., diameter or pitch, and the cost is little more than a 3-blade standard wheel. See your FEDERAL dealer, NOW! It will pay you.

FEDERAL PROPELLERS GRAND RAPIDS 3, MICHIGAN

PFLUEGER HOOKS



- LONGER RUST RESISTANCE
- UNIFORMITY OF TEMPER
- UNION MADE IN U. S. A.

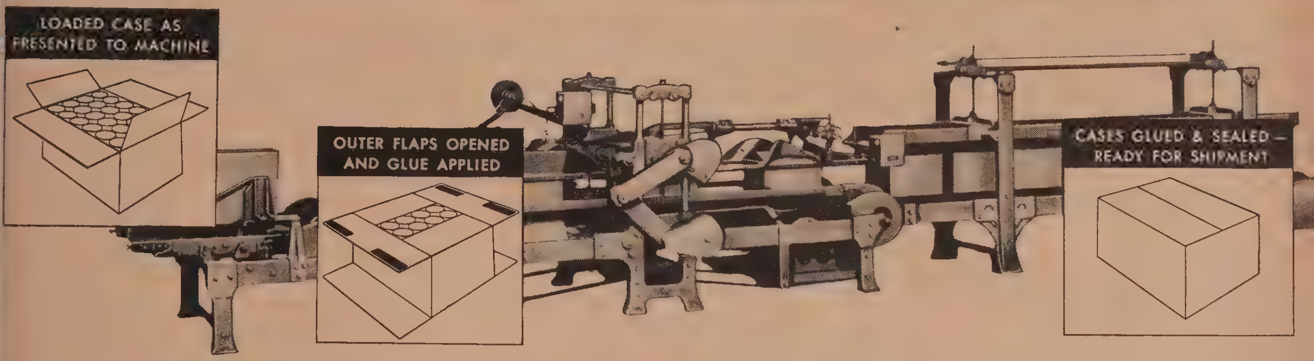
752 Different
Types and Sizes
Regularly Stocked

THE ENTERPRISE MFG. CO., AKRON 9, OHIO
89 years making fine fishing tackle

PFLUEGER A GREAT NAME IN TACKLE
(Pronounced "FLEW-GER")

STANDARD-KNAPP

GLUERS and SEALERS FOR SHIPPIN CASES


LOADED CASE AS PRESENTED TO MACHINE
OUTER FLAPS OPENED AND GLUE APPLIED
CASES GLUED & SEALED — READY FOR SHIPMENT

For Engineering, Sales and Service Information, Consult Our Nearest Field Office

MAILLER SEARLES, INC.

Main Office: 300 Seventh Street, San Francisco 3, California

WESTERN AVENUE
TTLE, WASHINGTON

4501 SO. SANTA FE AVENUE
LOS ANGELES 58, CALIF.

CASE
- UNLOADERS
- OPENERS
- PACKERS
- GLUERS AND SEALERS
- PRINTERS

CAN
- UNLOADERS
- CONVERGERS
- UNSCRAMBLERS
- LABELERS
- BOOSTERS
- PACKERS

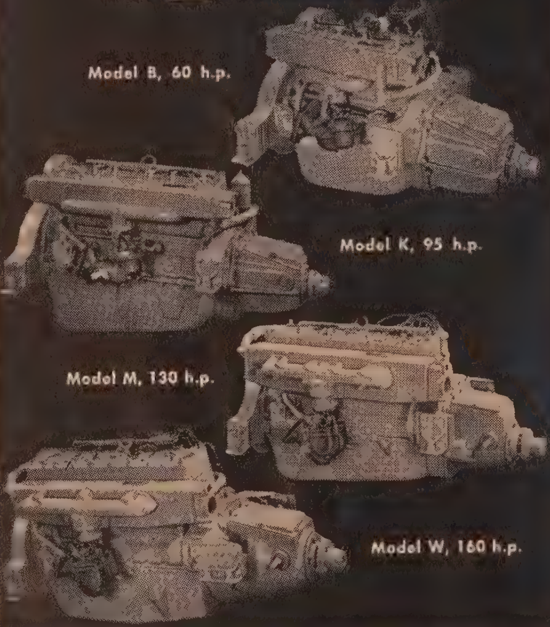
OTTLE d JAR
- UNLOADERS
- CONVERGERS
- UNSCRAMBLERS
- RINSERS
- DRIERS
- LABELERS
- PACKERS

CARTON and BAG
- COLLECTORS
- BALANCED LINE DIVIDERS
- PACKERS

Chris★Craft

WORLD'S BEST BUYS IN MARINE ENGINES

for fishing boats, work boats —for any commercial use!



Horsepower for horsepower, you can't buy a better marine engine for smooth, dependable operation and *more* years of hard service at low upkeep cost than a compact, power-packed Chris-Craft! Read what this user says:

Carlo Riva

"The present letter is being composed solely for the purpose of expressing our total and complete satisfaction in the behavior of the Chris-Craft marine engines which, for some years now, we have been installing in the hulls we manufacture and sell in Italy," writes Carlo Riva, renowned general manager of Cantieri Riva, Sarnico, Italy.

"It is indeed with the greatest pride and joy that we can point out to you that we are in possession of numerous letters from our customers saying with enthusiasm that they are exceptionally impressed with the Chris-Craft marine engines.

"With absolute certitude we feel that your marine engines will be used throughout all Italy in the near future, and remain meanwhile with our best regards."

Chris-Craft Marine Engines are available in 60, 95, 105, 120, 130, 131, 145, 158 and 160 h.p. with reduction drives and opposite rotation for most models. See your Chris-Craft Dealer or mail coupon for FREE catalog today! Buy NOW!

CHRIS-CRAFT CORP., MARINE ENGINE DIV., ALGONAC, MICH.
WORLD'S LARGEST BUILDERS OF MOTOR BOATS

CHRIS-CRAFT CORP., Algonac, Mich. **FREE!**
Send FREE Chris-Craft Marine Engine Catalog to:

Name____________________

Address____________________

City______________ State________

GENUINE BENDING OAK
PHILIPPINE MAHOGANY PLANKING
IRONBARK - TALLOWWOOD
CABINET WOODS
Mahogany, Oak, Walnut, Birch, Maple, etc.
PLYWOOD
Mahogany, Oak, Walnut, Birch, Waterproof Fir
HEAVY OAK DIMENSION

GENERAL
HARDWOOD COMPANY
TACOMA 2, WASH.

Seattle: SEneca 6276 Tacoma: BRoadway 5151

How one packer speeds up fish loading and sorting

- Fresh-caught fish are unloaded right from the boat by a Cyclone Stainless Steel Flat Wire Conveyor Belt. As the belt carries the fish to automatic weighing and recording device, all debris, ice, water and undersize fish fall through the open mesh of the belt—eliminating all hand sorting operations.

This is just one example of the many ways in which Cyclone Metal Conveyor Belts are giving good service. Our engineers can tell you which of many Cyclone Conveyor Belts—available in a variety of styles, sizes, metals and finishes—will best meet your requirements. Write for a copy of our free Catalog #4 to Dept. R-14.

U·S·S CYCLONE
METAL CONVEYOR BELTS

CYCLONE FENCE DEPARTMENT
AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL CORPORATION
954 60th St., Oakland 8, California.
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS

UNITED STATES STEEL

LIBBY, McNEILL & LIBBY

PACKERS OF
WORLD FAMOUS FOOD PRODUCTS

FLATS

TALLS

Libby's
RED ALASKA SOCKEYE
SALMON
Libby's
RED
ALASKA SOCKEYE
SALMON

Libby's

RED ALASKA
SOCKEYE
SALMON

LIBBY, McNEILL & LIBBY

In Salmon, too . . .
LOOK TO LIBBY'S FOR PERFECTION

Proved in One...
Approved for All
...Monel Shafting

It stands to reason — what proves good in one boat should prove equally so in others.

That's what Victor Mavar thought when he discovered the excellent service he was getting from a Monel® shaft in his 55½ ft., Caterpillar Diesel powered, shrimp boat "Victor Mavar." It has lasted as long as the boat, successfully withstanding abrasion and the bite of corrosive salt water.

This was so much better than his bronze shaft service records, that he had tough and long lasting Monel shafts installed on his fleet of thirty boats.

Monel has been first choice of engineers and owners for more than two generations as a most dependable and thoroughly practical marine metal.

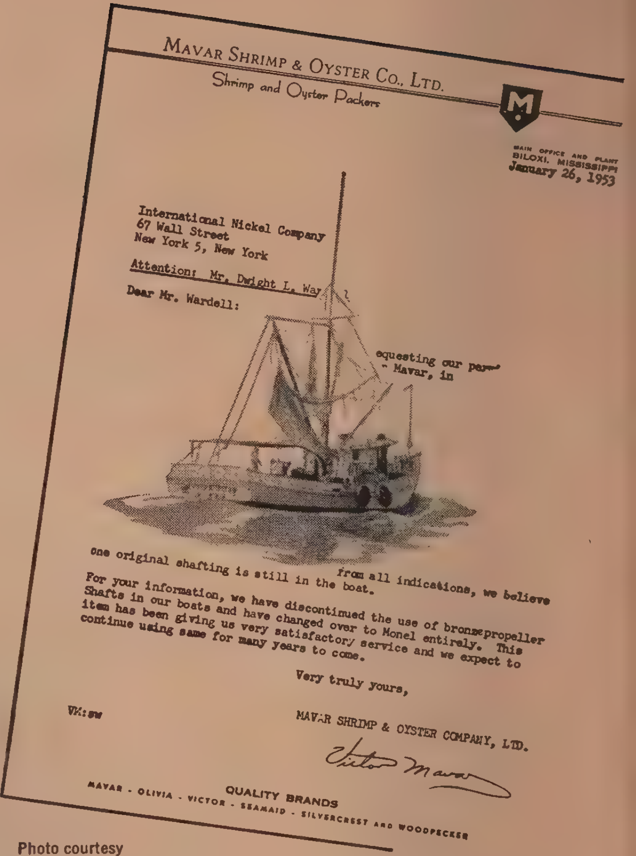
Specify it now for your boats, too.

THE INTERNATIONAL NICKEL CO., INC.
67 Wall Street New York 5, N. Y.

INCO

Inco Nickel Alloys

Monel *"...It's the* SEAGOIN'® *metal"*



MAVAR SHRIMP & OYSTER CO., LTD.
Shrimp and Oyster Packers

MAIN OFFICE AND PLANT
BILOXI, MISSISSIPPI
January 26, 1953

International Nickel Company
67 Wall Street
New York 5, New York

Attention: Mr. Dwight L. Way

Dear Mr. Wardell:

equesting our pe
Mavar, in

from all indications, we believe one original shafting is still in the boat.

For your information, we have discontinued the use of bronze propeller Shafts in our boats and have changed over to Monel entirely. This item has been giving us very satisfactory service and we expect to continue using same for many years to come.

Very truly yours,

VM:sw

MAVAR SHRIMP & OYSTER COMPANY, LTD.

Victor Mavar

QUALITY BRANDS
MAVAR - OLIVIA - VICTOR - SEAMAID - SILVERCREST AND WOODPECKER

Photo courtesy
the Caterpillar Tractor Company

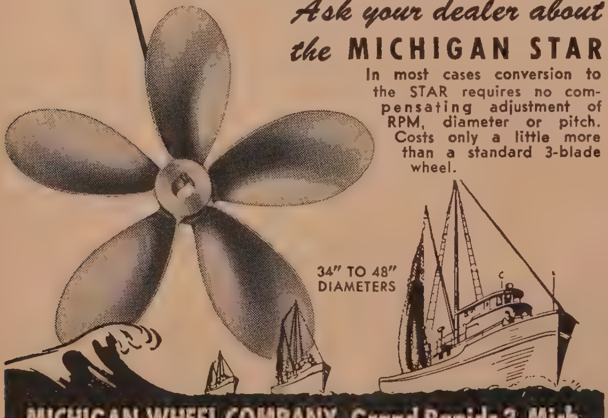
"YOU WOULDN'T BELIEVE A CHANGE OF WHEELS COULD ACCOMPLISH SO MUCH!"

That is the reaction of practically every one of the hundreds of commercial craft owners who have switched from standard 3-4 blade wheels to the revolutionary new MICHIGAN STAR 5-blade wheel.

IT ELIMINATES RUINOUS STERN VIBRATION . . . INCREASES SPEED . . . SAVES FUEL . . . GIVES BETTER REVERSE AND STEERING.

***Ask your dealer about the* MICHIGAN STAR**

In most cases conversion to the STAR requires no compensating adjustment of RPM, diameter or pitch. Costs only a little more than a standard 3-blade wheel.



MICHIGAN WHEEL COMPANY, Grand Rapids 3, Mich.

You Can Depend upon
MUSTAD
Key Brand FISH HOOKS

For the utmost in sharpness, strength, temper and wear-resisting finish get Mustad fish hooks. Their keen points give effortless penetration and their sturdy bends and shanks rarely fail to bring in your catches. Ask your dealer for Mustad hooks — the kind that will save you fish and cut down your fish hook replacements and repairs.

O. MUSTAD & SON
Manufacturers
ESTABLISHED 1832
OSLO NORWAY

SALES AGENTS
H. L. BOWLDS & SON
354 So. Spring St., Los Angeles

REIDAR GJOLME & SONS
809 37th St., Seattle

EDWARD LIPSETT, LTD.
Vancouver, Victoria, Prince Rupert

COAST FISHERIES

DIVISION OF

The Quaker Oats Company

—Packers of—

California Sea Foods

●

SARDINES

TUNA • MACKEREL

PUSS 'N BOOTS CAT FOOD

Fish Meal and Oil

●

—BRANDS—

BILTMORE
FLAKIES
MERMAID SUPREME
SATISFACTION
WAVE KIST
TREASURE
KING SOLOMON

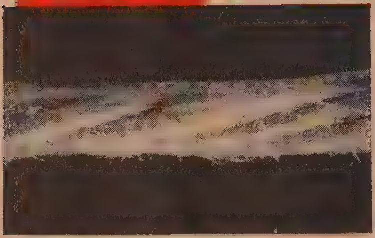
●

WILMINGTON, CALIFORNIA

Cable Address—Cofisco **Codes—Bentley Calpac, A. B. C. (5th Edition)**

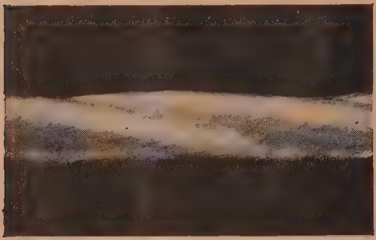
3 GREAT BARBOUR NETTINGS

For Pacific Coast Salmon Fishermen



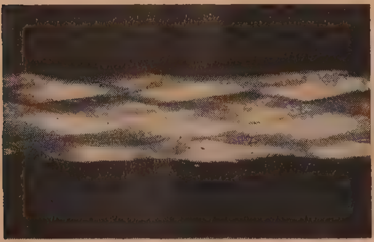
a favorite with fishermen for over one hundred years – the most convincing testimonial to its efficiency and dependability.

LINEN
highly magnified view shows construction detail of this "Barbour's Best" linen salmon gill netting.



introduced two years ago and immediately accepted by fleets and independent salmon fishermen. Catches more fish, handles easy and is rotproof.

NYLON
100% filament nylon netting . . . no artificial stiffening . . . extra strong and long-lasting.



the newest type netting yet produced. Tried, tested and enthusiastically received. You owe it to yourself to try this most advanced improvement in nylon netting. Available in limited quantities only.

NYLON (braided)
100% filament nylon netting – note intricate braid structure which holds yarn filaments closely together.

Linen or nylon – each has its own special advantages. Whichever you prefer, make sure you choose the netting backed by the Barbour name.

MAKERS OF FINE NETTING FOR OVER A CENTURY

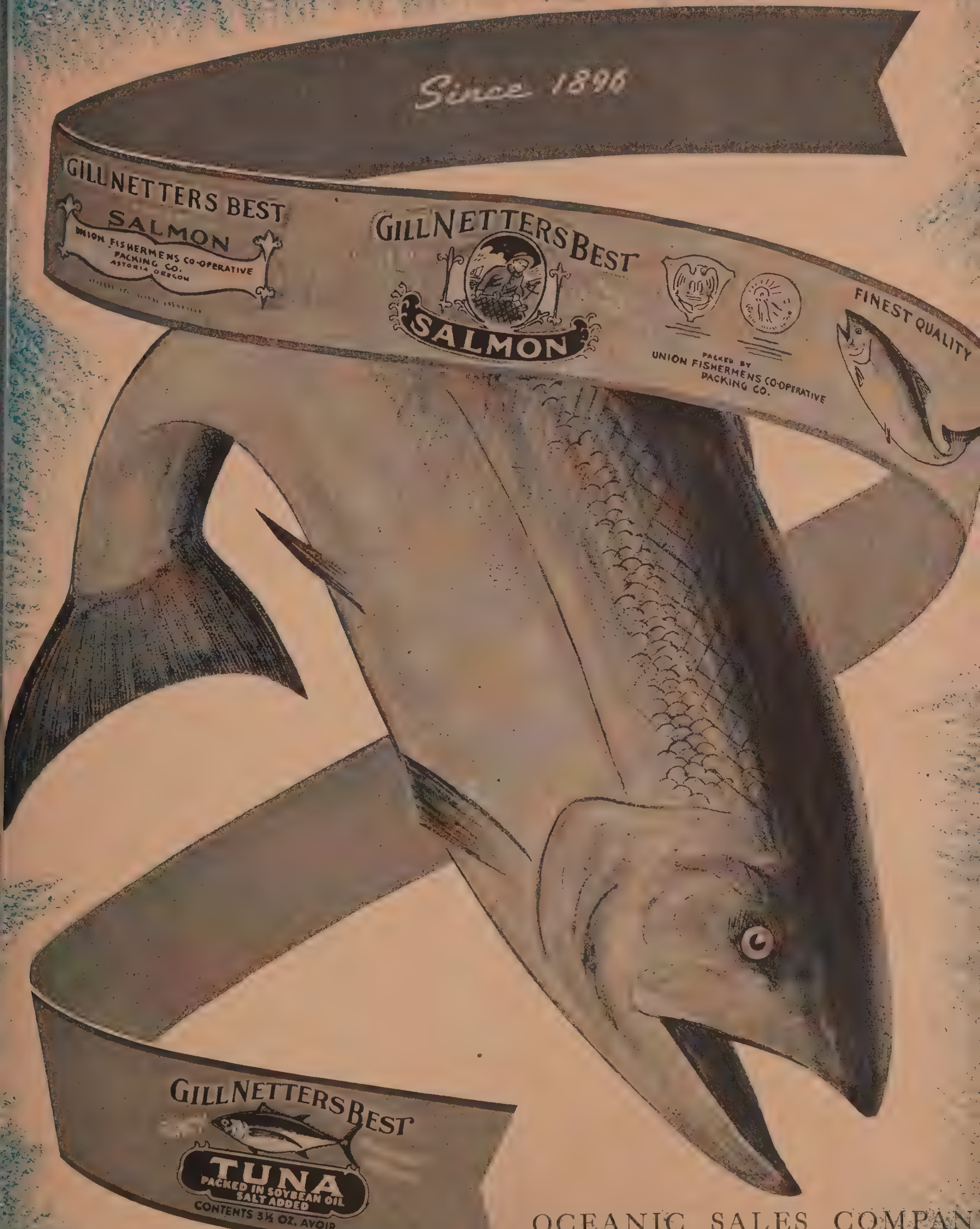
BARBOUR'S

THE LINEN THREAD CO., INC.

DOUBLE-KNOT SALMON GILL NETTING

Pacific Marine Supply Co., Seattle
Tacoma Marine Supply Co., Tacoma
Oregon Marine Supply Co., Portland and Astoria
Pacific Fishing & Trading, Seattle

California Distributors: Cincotta Bros., San Francisco and Monterey. Marine Hardware Co., Inc., San Pedro and Terminal Island. Nuttall-Styris Co., San Diego. San Diego Marine Hardware Inc., San Diego.


Since 1896
GILLNETTERS BEST
SALMON
UNION FISHERMENS CO-OPERATIVE PACKING CO.
ASTORIA OREGON
GILLNETTERS BEST
SALMON
PACKED BY
UNION FISHERMENS CO-OPERATIVE PACKING CO.
FINEST QUALITY
GILLNETTERS BEST
TUNA
PACKED IN SOYBEAN OIL
SALT ADDED
CONTENTS 3½ OZ. AVOIR.

OCEANIC SALES COMPAN
3302 SMITH TOWER, SEATTLE 4, WASH.
—EXCLUSIVE SALES AGENTS—

UNION FISHERMEN'S CO-OPERATIVE
PACKING COMPANY

FOR WASTE-FREE PROCESSING OF YOUR SEA FOOD

Use
MODERN
MAID

REDI-BREADER and
All Purpose Batter Mix

The Perfect Combination for all Sea Foods
to be Breaded, Frozen and Fried

Whether you bread fillets, Fish Sticks, or a sea food platter, you can be sure of quality ingredients when you use MODERN MAID. Redi-Breader and All Purpose Batter Mix work equally well in automatic breading machines or in manual operations.

Associate Member Nat'l Fisheries Inst.,
Shrimp Assn. of the Americas, NFFDA

THE MOST ECONOMICAL METHOD FOR BREADING FILLETS, FISH STICKS, AND ALL SEA FOOD

Write for Special Formulations and Other Technical Data

MODERN MAID
FOOD PRODUCTS, Inc.
110-20 Dunkirk Street, Jamaica 12, New York

Represented By:

Ivar Wendt
Seattle

Wyman Foorman Co.
San Francisco

Brown Brokerage Co.
Los Angeles

LESLIE SALT

A PROVED PRODUCT
FOR EVERY FISHERY USE!

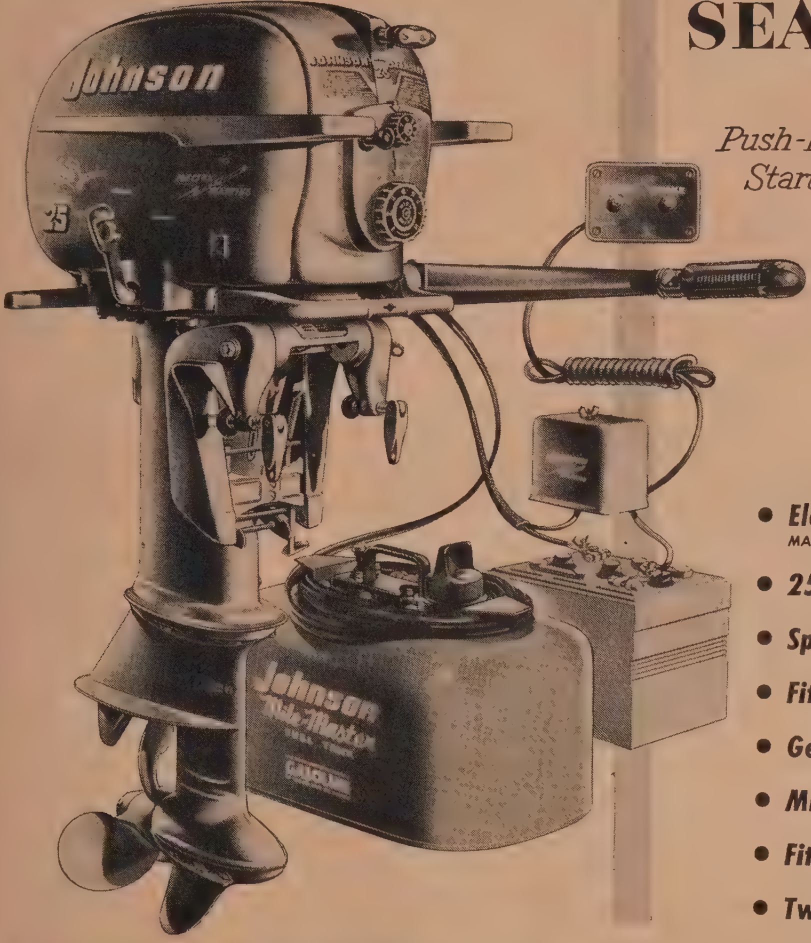
Leslie's Special Grades of Salt
For the Fishing Industry

- Kiln Dried Fine for mild curing
- Vacuum Canners & Kiln Dried Medium for canning

LESLIE SALT CO.
Lenora Dock, Pier 65, Seattle
79 S. E. Taylor St., Portland
505 Beach Street, San Francisco
2116 Sacramento St., Los Angeles
In Canada — Vancouver Salt Co., Ltd., Vancouver, B.C.

KILN DRIED MEDIUM
100 POUNDS NET WT.
KILN DRIED MEDIUM
LESLIE
Salt
LESLIE SALT CO., SAN FRANCISCO

New! ELECTRIC STARTING SEA-HORSE 25



Push-Button Starting

- ***Electric Starting!*** — ALSO EQUIPPED FOR MANUAL STARTING
- ***25 Horsepower!***
- ***Speeds over 30 mph!***
- ***Fitted for Ship-Master Remote Control!***
- ***Gear Shift!*** FORWARD-NEUTRAL-REVERSE
- ***Mile-Master Fuel System!*** 6 GALLONS
- ***Fitted for Fuel-Master Supply System!***
- ***Twist-Grip Speed Control!***

Johnson
SEA-HORSE
OUTBOARD MOTORS

Talk about the "automatic outboard." This is IT! Here is everything that has made the Sea-Horse 25 sensational — PLUS JOHNSON-ENGINEERED ELECTRIC STARTING!

It spins into action at the first touch of the starter button (still equipped for manual starting, too). In fact, this great motor is engineered so that you can choke, start, shift, throttle, steer, and stop *without leaving your seat up front!* In addition to the 6-gallon Mile-Master Fuel System (standard equipment), it's fitted for Johnson's amazing new Fuel-Master Supply System, for *extra-long* cruising range — and Ship-Master Remote Control, for shift-and-throttle operation.

Nothing has ever been created to make outboard handling so simple, so convenient, so luxurious. Get the full story. See your Johnson Dealer. Look for his name under "Outboard Motors" in your classified phone book.

FREE!

Send for colorful, fully-illustrated catalog which describes, in detail, the Electric Starting Sea-Horse 25 and the four other great Johnsons. Catalog is yours for the asking. Write to:

JOHNSON MOTORS
6700 Pershing Road, Waukegan, Illinois
In Canada: Mfd. by Johnson Motors, Peterborough

5 GREAT SEA-HORSES FOR 1954

ELECTRIC STARTING SEA-HORSE 25—25 hp. The "automatic outboard"	$498.00*
SEA-HORSE 25—25 hp. Over 30 mph! Everything Deluxe	$410.00*
SEA-HORSE 10—10 hp. New! Improved! Now more brilliant than ever!	$297.50*
SEA-HORSE 5½—5½ hp. Revolutionary *Quiet!* Suspension Drive. All the "big-motor" features with "little-motor" weight	$210.00*
SEA-HORSE 3—3 hp. "The littlest Sea-Horse." Rugged. Amazing Angle-matic Drive	$145.00*
SHIP-MASTER REMOTE CONTROL—Shift-and-throttle. Corrosion-proof. Instant hook-up on Sea-Horse 5½, 10 and both 25's. From	$29.50*

OBC **Prices f.o.b. factory, subject to change. OBC certified brake hp at 4000 rpm.*

BIBB
The First Name in TEXTILES
PORTERDALE SUPERIOR
SEINE TWINE
MANUFACTURED BY
PORTERDALE MILLS
HARD

More Fishermen put their Faith in Porterdale Superior Seine Twine than in any other brand.

BIBB
The First Name in TEXTILES
PORTERDALE SUPERIOR
SEINE TWINE
MANUFACTURED BY
PORTERDALE MILLS
MEDIUM

BIBB
The First Name in TEXTILES
PORTERDALE SUPERIOR
SEINE TWINE
MANUFACTURED BY
PORTERDALE MILLS
SOFT

Out of experience grows FAITH. Generation after generation of Fishermen have learned from experience that both catch and equipment are safer with Porterdale Superior Seine Twine. Made by men who best know Fishermen's needs.

Insist upon Porterdale Superior Seine Twines and fishing quality Ropes for highest quality—lasting satisfaction.

BIBB MANUFACTURING COMPANY, Macon, Georgia

Keeping FAITH with Fishermen . . . *Since 1880*

PACIFIC COAST DISTRIBUTORS

SEATTLE, WASHINGTON
Seattle Marine & Fishing Supply Co.
Pier 59
Sunde & d'Evers Co.
No. 1 Colman Dock

ASTORIA, OREGON
Englund Marine Supply Co.
Foot of 15th Street

CALIFORNIA
Weeks-Howe-Emerson Co.
255 Mission Street
San Francisco
C. J. Hendry Co.
27 Main Street
San Francisco
C. J. Hendry Co.
San Pedro • San Diego

VANCOUVER, B. C.
Gundry (Pacific) Ltd.
364 Alexander Street
C. P. Leckie & Co.
1748 West Fourth Avenue

MEET
today's most versatile line
OF MARINE DIESELS
FOR PROPULSION AND AUXILIARIES

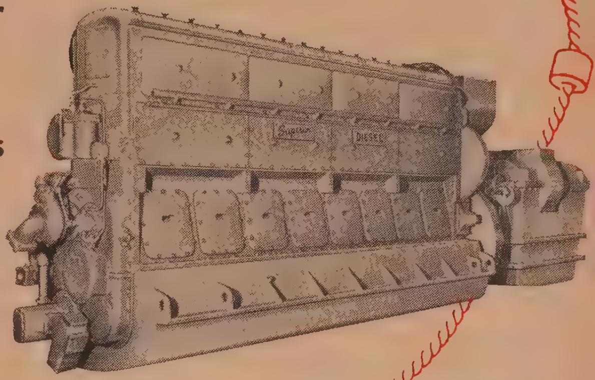
All models and sizes—
from 4 to 1765 horsepower

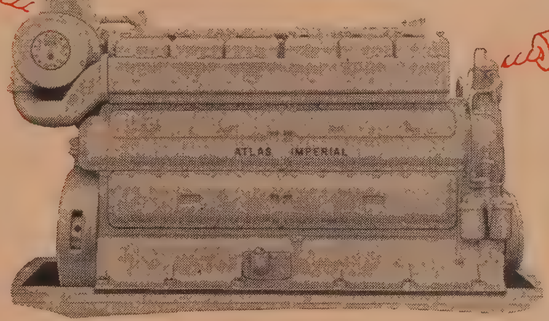
Superior Diesels have an enviable record for heavy duty, dependable and economical service needed by tugs, river towboats and other work boats. They are of the vertical, 4 cycle, cold-starting type, and are available in 6 or 8 cylinders, naturally-aspirated or supercharged.

Superior

HORSEPOWER RATINGS

Bore & Stroke	H.P. Range
8½ x 10½	215-650
12 x 15	400-925
12¾ x 15	580-1765
14½ x 20	600-1440





Atlas Diesels, in 4, 6 and 8 cylinder naturally-aspirated and supercharged models, offer a wide range of selection for dependable and economical marine power.

ATLAS

HORSEPOWER RATINGS

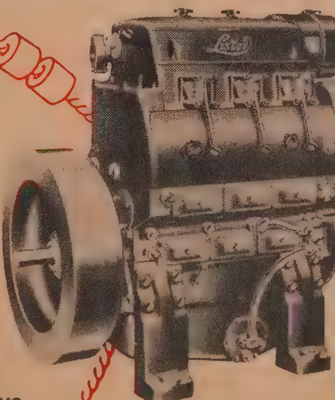
Bore & Stroke	H.P. Range
6½ x 8¼	100-300
8 x 10½	85
9 x 12	110
9 x 10½	160-600
11½ x 15	320-350
13 x 16	425-600
15 x 19	650-1000

Lister

For the built-in versatility needed on auxiliary power requirements—both aboard ship and ashore, National Supply now distributes the famous Lister line of small, compact and efficient diesel engines. Available in 1, 2, 3, 4 and 6 cylinder models, the new Listers feature complete accessibility, dual combustion chambers and individual fuel pumps for each cylinder.

HORSEPOWER RATINGS

Model No.	Bore & Stroke	H.P. Range
FR-1	3¾ x 4½	4-8
FR-2	3¾ x 4½	8-18
FR-3	3¾ x 4½	12-27
FR-4	3¾ x 4½	20-36
FR-6	3¾ x 4½	30-54



***FREE COMPLETE FACTS**—Engineering Bulletins are available on each of the Superior, Atlas and Lister Diesels listed above. Call your nearest branch listed below or write Springfield, Ohio*

Superior ENGINES
ATLAS Imperial DIESEL ENGINES

Distributor of Lister *Diesels in the U.S.A.*

ENGINE DIVISION
THE NATIONAL SUPPLY COMPANY

PLANT AND GENERAL OFFICES:
SPRINGFIELD, OHIO

SALES AND SERVICE POINTS:
Gloucester, Massachusetts
Houston • Fort Worth, Texas
San Diego • Oakland
Terminal Island, California
Ketchikan, Alaska
Washington, D.C. • Chicago
Portland • Astoria, Oregon
Casper, Wyoming
Halifax, Nova Scotia
Vancouver, B.C. • Toronto, Ontario
Park Rapids, Minnesota
New York • Seattle • New Orleans
Pittsburgh, Pennsylvania

ALASKA CANNED Salmon

There's good reason for the popularity of Alaska Gem and other salmon canned by Annette. Our cannery, ideally located adjacent to fishing grounds, is always assured a supply of fine, prime ocean-caught fish . . . salmon that are naturally best . . . fresh-caught and canned while at their best. Particular pride is taken, too, in handling and processing, in the cleanliness and sanitation of our modern cannery. All to safeguard the quality that is our reputation.

This same fine quality product is also available to the trade unlabeled, for private brand canning.

ANNETTE ISLANDS CANNING CO.

Cannery:
Metlakatla,
Alaska

— Packers —
Red, Cohoe, Pink
and Chum Salmon

Office:
Colman Building
Seattle 4, Washington

"green's pride . . .

Decking and planking stay brighter longer and keep weather-tight with Pettit finishes

On the bottom, it's Pettit's TROPICOP . . . the super-antifouling protection

GREEN'S PRIDE

is pettit's pride, too!"

Frank Green's new trawler, the "Green's Pride," wears a bright white protective coating of Pettit Paint from stem to stern, from deckhouse to keel — a coat that enables her to shrug off the damp weather, tropical sun and salt spray which gnaw away at the boats of Mr. Green's Brownsville, Texas fleet.

Mr. Green's experience should be a good example to fleet owners everywhere, and proof that Pettit Paints give element proof protection while maintaining an attractive appearance.

PETTIT
PAINT
CO.
INC.
SINCE
1861

PETTIT PAINT CO., INC. BELLEVILLE, NEW JERSEY
SAN LEANDRO, CALIFORNIA

PACIFIC COAST DISTRIBUTORS: Nordby Supply Co., Seattle, Wash., and Ketchikan, Alaska; The Beebe Co., Portland and Astoria, Oregon; Carstans Marine Supplies, Spokane, Wash.; Gray's Motor Service, Inc., Salt Lake City, Utah; B. H. Hebgen Co., Ltd., San Francisco and Los Angeles, Calif.; Nuttall-Styris Co., San Diego, Calif.; Outdoor Equipment Corp., Las Vegas, Nevada; Jack Bolton Marine, Denver, Colo.; Adanac Marine Supply Co., Ltd., Vancouver, B. C.; Ray Marine Distributing Co., Seattle, Wash.; Marine Components, Santa Monica, Calif.

QUALITY OUR FIRST CONSIDERATION

FIDALGO ISLAND PACKING CO.

SEATTLE 4, WASH.

PACKERS & DISTRIBUTORS

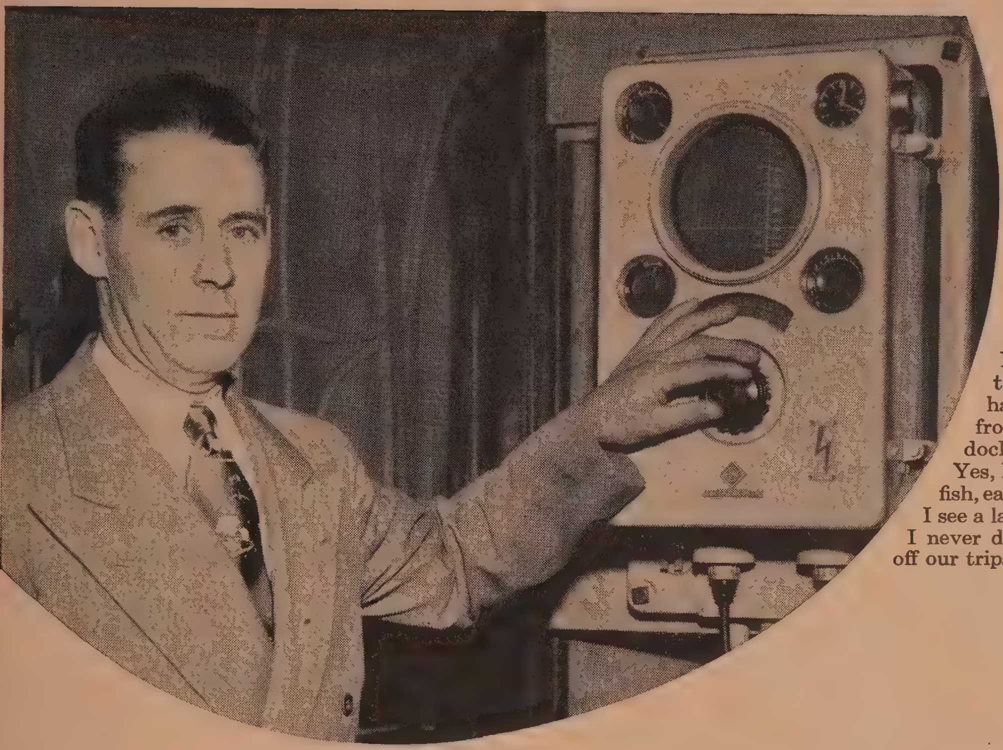
ALL GRADES

ALASKA & PUGET SOUND

SALMON

SELLING AGENTS
H. BELL-IRVING & CO., LIMITED
VANCOUVER, B. C.

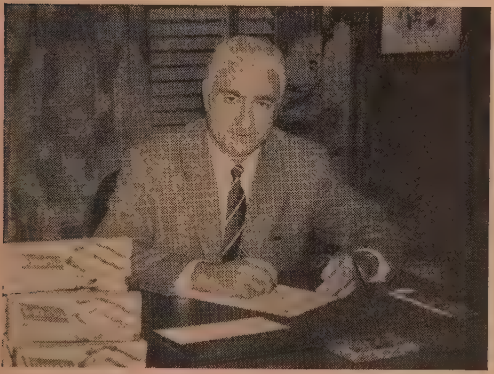
QUALITY OUR FIRST CONSIDERATION



"I don't fish by guesswork now. I can see the fish on FISCHLUPE," says Richard Dobbin, Captain of the "Flying Cloud," the first of six trawlers of the Irving Usen Trawling Company, Boston, to be equipped with the new electronic fish-finder. "Not only do schools of fish show clearly on FISCHLUPE, but I can tell the difference between hard and soft bottom, cod from haddock, large haddock from small haddock. Yes, I can even pick out single fish, easily spot a dogfish. Unless I see a large catch on FISCHLUPE, I never drop my nets. Cuts days off our trips."

NEW Electronic Fish-Finder

...more profits in less time



Lawrence Rosen, Vice-President and Marine Superintendent of the Irving Usen Trawling Company

Here's proof of its effectiveness: "Because of the proven success of FISCHLUPE aboard the 'Flying Cloud,' says Larry Rosen, "I am equipping the entire Usen Fleet with them."

WRITE FOR COMPLETE DETAILS TODAY!

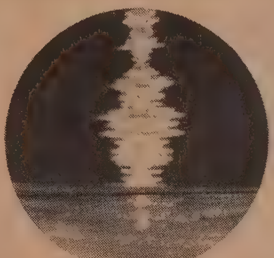


Photo of FISCHLUPE scope showing large school of fish at the bottom

FISCHLUPE* locates fish, spots underwater hazards that can hang your nets, aids navigation and functions as an underwater depth indicator. This most modern depth sounder is especially designed to function as an electronic fish-finder. No special knowledge is required to operate it. Supersonic signals are transmitted downward, reflect back from seabeds, schools of fish, rocks, wrecks, and plankton. You can see these clear visual indications from fish or other objects on the cathode ray tube. By merely flicking a switch you can magnify any eight-fathom segment of the normal maximum depth range of 320 fathoms. This allows you to examine objects at close range. The size of your haul can be estimated and unprofitable drags can be prevented.

*"Fish-Lens"

Radiomarine Corporation of America
1008 Western Avenue
Seattle 4, Wash.
Tel: Seneca 8178

Radiomarine Corporation of America
1075 Folsom St.
San Francisco 3, Calif.
Tel: MArket 1-1062

Radiomarine Corporation of America
437 North Avalon Blvd.
Wilmington, Calif.
Tel: Terminal 4-3469

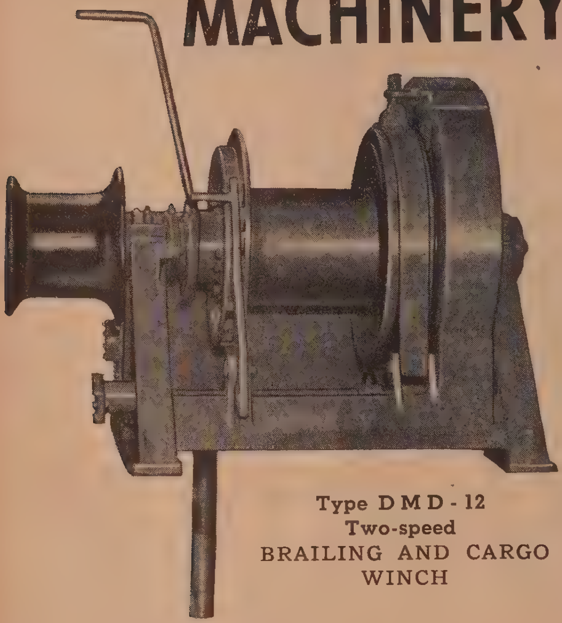
RCA

RADIOMARINE CORPORATION of AMERICA

A SERVICE OF RADIO CORPORATION OF AMERICA

MARKEY

DECK MACHINERY



Type DMD-12
Two-speed
BRAILING AND CARGO
WINCH

"FAVORED BY FISHERMEN"

Take the back-breaking work out of brailing and handling cargo with a modern **Markey Two-Speed Brailing Winch,** built for and proven by fishing boats everywhere. With fishermen—as with other work boat owners—Markey equipment is famous for its practical design, rugged construction, precision workmanship and lasting dependability.

We are at your service for engineering counsel and descriptive information.

Represented by

H. J. Wickert & Co.
770 Folsom Street
San Francisco

J. H. Menge Co.
932 Nat'l Bank of
Comm. Bldg.
New Orleans

DESIGNERS
& BUILDERS,
REPAIRERS

MARKEY MACHINERY CO., INC.
85 HORTON ST., SEATTLE 4, WASH.
"Known on The 7 Seas Since 1907"

Hoists • Capstans • Windlasses • Steering Gears • Towing Winches

APEX TROLLING RUBBERS

APEX TROLLING TUBING AND ALL TYPES OF RUBBER PRODUCTS FOR THE FISHING AND CANNING INDUSTRIES

HOSE — Steam, water, fire, exhaust, gasoline, suction, etc.

RED SHEET packing, retort door packing, pump diaphragms.

Manufactured by

The AMERICAN RUBBER MFG. CO.
Oakland 8, Calif.

All stocked by the five affiliated firms listed below:

PACIFIC MARINE SUPPLY COMPANY
1223 Western Avenue
Seattle, Washington

OREGON MARINE SUPPLY COMPANY
235 SW 1st Street
Portland, Oregon

TACOMA MARINE SUPPLY CO.
103 South 11th St.
Tacoma, Washington

PACIFIC FISHING & TRADING CO.
14th NW at W. 45th Street
Seattle, Washington

OREGON MARINE SUPPLY CO.
Astoria, Oregon

The
PACIFIC
NATIONAL
BANK
of Seattle

Pacific National has had 25 years of experience with the Northwest's fishing industry. Put this experience to work for you.

SECOND at MARION

SEATTLE, WASH.

Member F.D.I.C.

FISHING IS OUR BUSINESS

FOR 57 YEARS PACIFIC MARINE SUPPLY CO. HAS OFFERED THE FISHING INDUSTRY OF PUGET SOUND AND ALASKA THE BEST EQUIPMENT WE COULD FIND TO SERVE YOUR NEEDS. EXPERIENCE HAS TAUGHT US THROUGH THE YEARS THAT—

"NOTHING IS AS CHEAP AS THE BEST"

PRODUCTS OF *PROVEN* DEPENDABILITY!

BARBOUR'S NYLON & LINEN NETTING

•

GOLD MEDAL COTTON NETTING & TWINE

•

PLYMOUTH ROPE & TWINE

•

BENDIX DEPTH SOUNDERS & PILOTS

•

EDWARDS TRAP NETTING & WIRE

•

UNIVERSAL MARINE ENGINES

WOOLSEY MARINE PAINTS

•

WILFRED O. WHITE COMPASSES

•

PYRENE & CO-2 FIRE EQUIPMENT

•

MERCURY OUTBOARD MOTORS

•

GOODRICH CUTLESS RUBBER BEARINGS

•

CHAMPION SPARK PLUGS

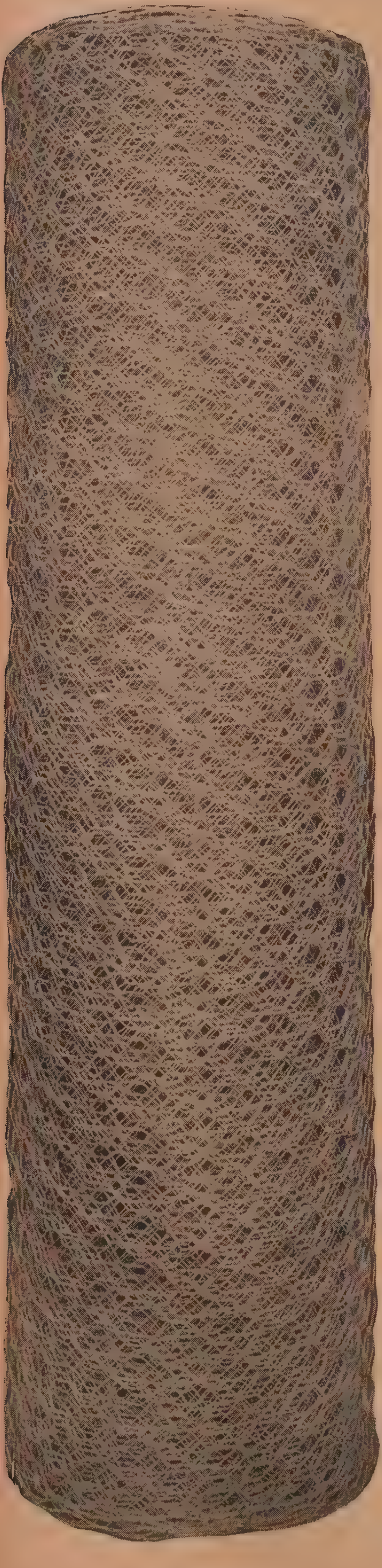
These are only a few of the thousands of items we ***carry in stock!***

PACIFIC MARINE SUPPLY CO.

Serving the Northwest and Alaska since 1897

1217-1223 WESTERN AVE., SEATTLE 1, WASH. MAIN 1573

EDWARDS



WIRE FISH TRAP NETTING

•

WIRE ROPE

MADE ON THE COAST
By EDWARDS WIRE ROPE
South San Francisco, California

•

Distributed to the Salmon Packers by
PACIFIC MARINE SUPPLY CO.
SEATTLE, WASHINGTON

•

E. H. EDWARDS COMPANY

Main Office—625 Market Street
SAN FRANCISCO 5, CALIFORNIA

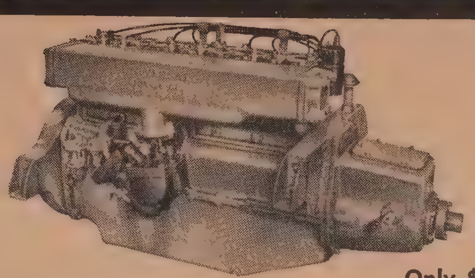
E
EDWARDS
WIRE ROPE
STERLING STEEL

NOW ...in 1954...

Universal Sets the Pace!

Proudly we present the industry's most carefully planned marine motors for fishing service. To make them precisely what you require — in bigger power output and space-saving small size, we consulted fishermen, naval architects and boat builders.

The net result is two fine sizes — each filling a definite need for really modern marine power. Both offer maximum efficiency and dependability — are easier than ever on fuel and maintenance costs. Thoroughly proved, they are backed up by one of the greatest guarantees of marine motor satisfaction: the name "Universal."



Only $895

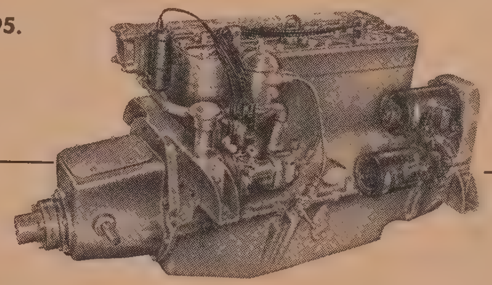
EXPLORER SIX — 95 HORSEPOWER

Measures only 40⅝ inches, weighs only 684 pounds. It has precision-balanced 7-bearing crankshaft; full-length water jackets; chrome-nickel alloy iron castings; oil sump pump; rubber (or rigid) mountings, etc. Hydraulic or manual reverse; various reduction gear ratios and power take-off equipment. 230 cubic inch displacement, 95 h.p. at 3200 r.p.m. **Only $895.**

MASTER SIX — 105 HORSEPOWER

A power-packed, high torque six providing big lugging ability in small size—**just 40⅝ inches.** Weight is only 698 pounds. Has all the quality features you expect from Universal: corrosion-resistant castings; precision-balanced, counter-weighted 7-bearing crankshaft; built-in hand sump pump; larger, deeper water jackets, etc. Hydraulic or manual reverse, various reduction ratios. 236 cubic inch displacement, 105 h.p. at 3200 r.p.m. **Only $995.**

Only $995.



2 NEW MODELS

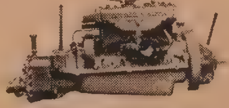
NEW LOWEST PRICES!

ALL THROUGH THE LINE!

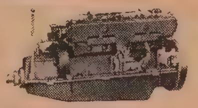
Now you actually pay less for premium Universal quality. Effective January 1, every single Universal carries a much lower price tag — for savings up to hundreds of dollars on many models. Only the prices are lower. Nothing else! They are still built to give Universal's traditionally higher standards, still the same for true-marine construction. Now, with prices lower than the lowest, move up to a Universal—the most respected name in 100% Marine (R) Motors! See your Universal dealer.

You can't buy higher quality at lower prices anywhere!

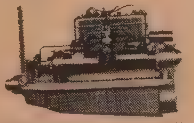
Super-Six Stevedore—for rugged power with polished smoothness and unusual economy. Less than 45" over-all, 130 h.p. at 2800 r.p.m., 340 cubic inch displacement. Also Commodore model, 145 h.p. **Only $1195.**



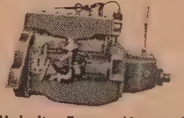
Super-Four—Here is service and performance measured by the tens of years! 50 h.p. at 3000 r.p.m., 149 cu. in. **Only $695.**



Cruiser Six — a favorite of fishermen for fine, economical operation. 90 h.p., 260 cu. in. **Only $995.** (Also 110 h.p. Sea Lion Six at **$1,025,** and 60 h. p. Blue-Jacket Six at **$725.**)



Utility Four—Fastest selling motor in the world in its class — and good reasons! It's so economical, so dependable, 25 h.p. at 2500 r.p.m., 95 cut. in. **Only $500.**



Unimite Four — Most advanced big-power four. 141 cu. in. displacement. 65 h.p. **Only $666** complete.

Fisherman — The leading one-cylinder water-cooled true marine motor. Uses less than two quarts of fuel an hour. 8 dependable h.p. at 1200 r.p.m., 68 cu. in. **Only $245.**

Also OTHER POPULAR MODELS at NEW LOW PRICES!

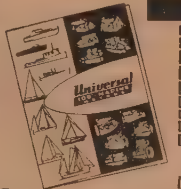
Mail for Free Literature!

Universal Motor Co.

423 Universal Drive, Oshkosh, Wisconsin

WORLD'S LARGEST BUILDERS OF 100% MARINE MOTORS
AND TRUE-MARINE ELECTRIC PLANTS

Seattle—Pacific Marine Supply Co. – San Francisco—Thomas A. Short Co.
Los Angeles and San Diego—Shepherd Marine – Honolulu—McWayne Marine Supply Co. – Prince Rupert, Vancouver and Victoria—Edward Lipsett, Ltd.
Coos Bay, Oregon—Elfving's Marine & Builders Supply
Portland—Lee McCuddy's Columbia Marina



UNIVERSAL MOTOR COMPANY
423 Universal Drive
Oshkosh, Wisconsin

——Send me free literature on the entire 1954 Universal line with new low prices.
——Mail me complete information and specifications on the new Universal models.

Name . . . .
Address . . . .
City . . . . Zone . . State . . . .

CUT YOUR HULL MAINTENANCE COSTS!

Trevarno Glass Boat Fabric Protects Hull Surfaces Against

water logging **scuffing, leakage**
marine growths **rot, worms**

LESS TIME OUT OF WATER
Trevarno Fabric covering for your wood hull assures you more time for fishing, cuts hauling costs, reduces hull maintenance expense! Trevarno Fabric bonds to hull, seals against leaks, gives you a stronger, better looking boat.

EASY TO APPLY
Trevarno Boat "B" Fabric is scientifically engineered for commercial use. It has tremendous tensile strength, adds shock resistance to hulls and forms a permanent, invisible covering impervious to moisture, rot or petroleum fluids. Trevarno lasts the boat's lifetime—cuts yearly maintenance costs! Just paint resin and hardener on clean, dry hull. Smooth on Trevarno Boat "B" Fabric. Apply second coat of resin and hardener. Then, sand hull lightly and paint, *or leave it natural* (Trevarno lets the wood grain show through, adding to the beauty of your boat.)

DECKS AND CABIN TOPS, TOO
Trevarno Fabrics provide a permanent bonded surface that protects decks and cabin tops from leakage, scuffing, damage from sea and sun. Lightweight Trevarno Boat "A" Fabric is ideal for small boats, topside bulkheads, etc.

2740

Trevarno
GLASS FABRICS

Ask your Marine Supply
Dealer, or write

COAST MANUFACTURING & SUPPLY CO.
BOX 71F, LIVERMORE, CALIFORNIA

KAYLER-DAHL FISH CO.

"POLAR STAR" BRAND

MILDCURED
CANNED — FRESH — FROZEN
ALASKA — PUGET SOUND

SALMON — HALIBUT — COD — SHELLFISH

120 6th N.
SEATTLE 4

PETERSBURG
ALASKA

188 West Randolph St.
CHICAGO

TUNA CLIPPERS
PURSE SEINERS
DRAGGERS—TROLLERS
SPORT FISHERMEN
YACHT OWNERS

Developed during World War II . . . tested under actual operational conditions . . . SHARKO is a proven product. SHARKO repels attack from sharks. For personal protection—for protection of your fishing nets — ORDER SHARKO NOW!

Don't Be Without SHARKO
The Only Sure Protection Against Attack From Sharks
IT'S NOW AVAILABLE TO YOU FOR THE FIRST TIME!

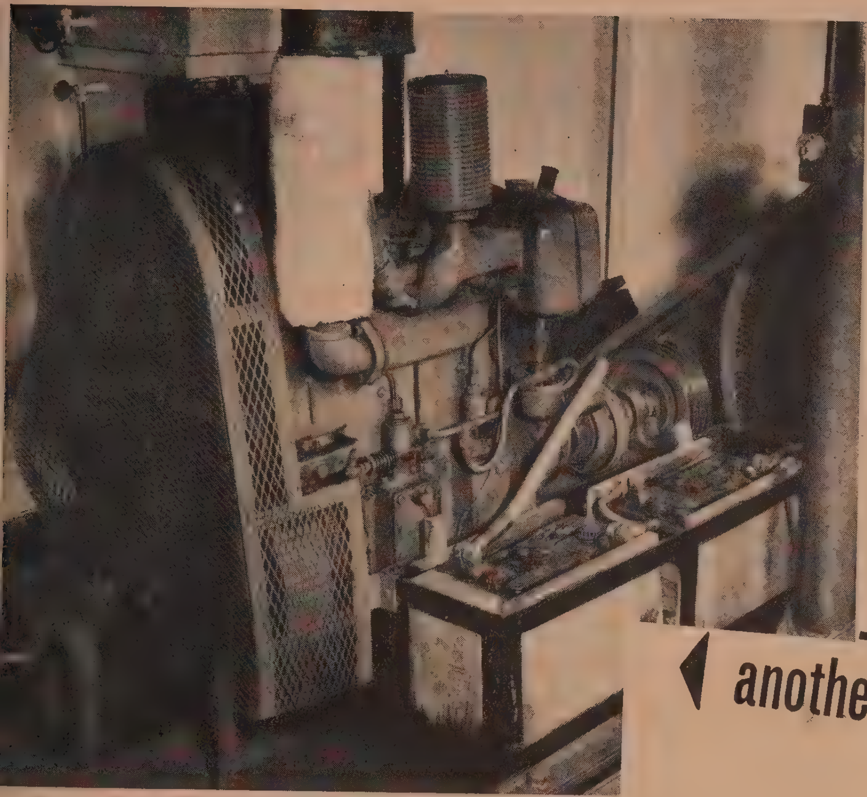
SHARK CHASER
SHARKO

WRITE! WIRE! PHONE TODAY FOR COMPLETE INFORMATION ON SHARKO
THE ONE AND ONLY SHARK CHASER CHEMICAL ON THE MARKET
Dept 2—SHARK CHASER CHEMICALS CO., 413 W. Seventh Street, San Pedro, Calif
Cable Address—SHARKEM

PETTER DIESEL ENGINES

3-40 h.p.

WATER & AIR COOLED



Marine Auxiliary Power for:-

- GENERATORS
- BILGE PUMPS
- AIR COMPRESSORS
- REFRIGERATION
- WINCHES etc.

◄ another Petter installation

WEST COAST MAIN FACTORY DISTRIBUTORS

Motor Parts Machine Co.
807-815 E. Pike Street,
Seattle, Washington.

Shepherd Tractor &
Equipt. Co.
Atlantic & Bandini Blvds.,
Los Angeles, California.

West Coast Engine &
Equipt Co.
1077 Eastshore Hwy.,
Berkeley, California.

SERVICE & SPARE PARTS AVAILABLE COASTWISE

Petter AV2 driving 2 stage 30 cub. foot Air Compressor aboard Harbour Tug & Barge Co's. tow boat "SACRAMENTO" operating in the San Francisco Bay.

PETTER DIESEL ENGINE DIV. BRUSH ABOE INC

60-07 39th AVENUE · WOODSIDE 77 · NEW YORK

These Canco plants help insure future

No.1 TALL
No.1 OVAL
No ½ FLAT

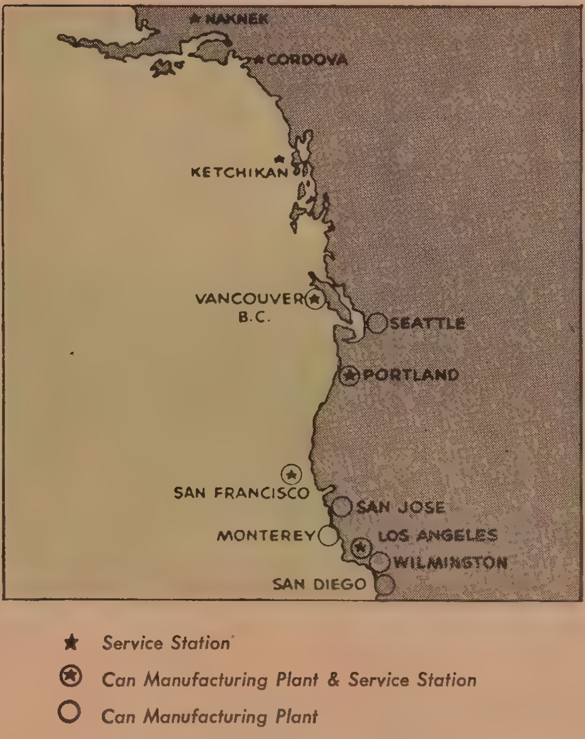
CANCO'S manufacturing plants and service stations are strategically located all along the Pacific Coast to serve the fishing industry.

owth of the fish canning industry

When you need containers to fill an order, you need them *fast!* There's a Canco plant near you which can supply you quickly with the *right* container to fill your needs.

Expert engineers and equipment servicemen are at your disposal to help train operators and keep your equipment working at top efficiency.

All along the Coast, Canco keeps pace with the ever-expanding fish canning industry.



NAKNEK
CORDOVA
KETCHIKAN
VANCOUVER B.C.
SEATTLE
PORTLAND
SAN FRANCISCO
SAN JOSE
MONTEREY
LOS ANGELES
WILMINGTON
SAN DIEGO
★ Service Station
⊛ Can Manufacturing Plant & Service Station
○ Can Manufacturing Plant

Go first to the people who are first

AMERICAN CAN COMPANY

NEW YORK • CHICAGO • SAN FRANCISCO • HAMILTON, CANADA

• ST. LOUIS, MISSOURI • CHICAGO, ILLINOIS • NEW ORLEANS, LOUISIANA • BALTIMORE, MARYLAND •

MOBILE, ALABAMA • SAN DIEGO, SAN FRANCISCO, SAN PEDRO, CALIFORNIA

NORFOLK, VIRGINIA • SEATTLE, WASHINGTON • VANCOUVER, BRITISH COLUMBIA

OSWALD MACHINE WORKS . . . *offers complete parts and service for*

S-N MARINE GEARS

No matter where you may be, from the Atlantic to the Pacific, you'll usually find an established S-N distributor ready to provide dependable parts and service. They, like hundreds of fleet and boat owners recognize from first hand experience the *reliability, outstanding performance and smooth power transmission* of these world famous Snow-Nabstedt Marine Gears. Remember . . . for S-N parts, see your engine distributor first. If he cannot offer immediate service, contact your nearest S-N distributor.

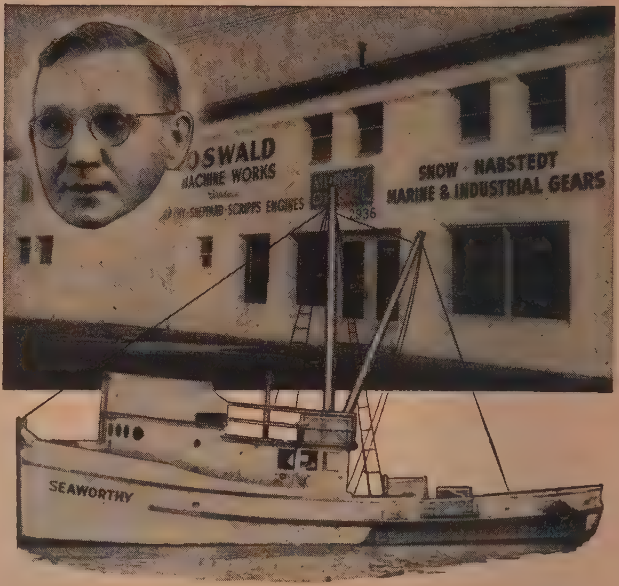
ON THE FINEST MARINE ENGINES 4 TO 1000 H.P.

SNOW-NABSTEDT

Transmission Engineers

FOR NEARLY HALF A CENTURY

THE SNOW-NABSTEDT GEAR CORP., HAMDEN, CONN.



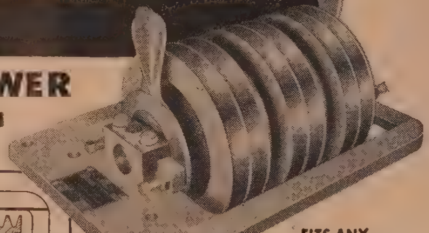
• Charles Oswald , • Oswald Machine Works — 2936 Hyde Street, San Francisco, California • The "Sea Worthy" powered with Murphy Diesel Model ME-150, 150 H.P. S-N MARINE GEARS Model 3766, 3:1 ratio.

• DETROIT, MICHIGAN • JACKSONVILLE, MIAMI, FLORIDA • PORTLAND, OREGON • HOUSTON, TEXAS •

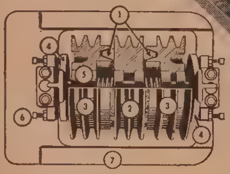
The New ALBINA DIRECT CONTROL POWER TAKE-OFF

Double Belt Model
Wt. 35 lbs.

PUTS POWER
Where you need it!



FITS ANY MARINE ENGINE



1. Cone clutches.
2. Pulley driven from engine crankshaft.
3. Clutch pulley (independently controlled).
4. Control Levers
5. Sealed ball bearings (no lubrication necessary).
6. Adjusting screws.
7. Mounting frame.

The manually operated Albina Power Take-Off now has die cast operating levers of Aluminum-Zinc copper alloy with a stainless steel wearing strip cast as an integral part. There are also die cast aluminum alloy sheaves and die cast aluminum alloy shaft standards. Full molded friction linings from permanent molds. The shaft is stainless steel. SKF bearings are permanently lubricated and sealed.

Write for illustrated descriptive folder.

ALBINA ENGINE & MACHINE WKS.
2100 N. Albina Ave. Portland, Oregon

AQUA-CLEAR Feeders

Double the Life of Marine Engines

Cool Direct with Raw Seawater —without Rust or Corrosion

AQUA-CLEAR Feeders have revolutionized marine engine cooling. This amazing invention treats all water going through the cooling system so it is non-corrosive —protects cylinder heads, blocks, manifolds, liners, etc. Makes old engines last years longer—keeps new ones from ever rusting.

Write for valuable booklet "How to Double Engine Life"— FREE. Dealers: Write for Special Offer.

Sold and Installed by Leading Boatyards

OVER 20,000 NOW IN USE

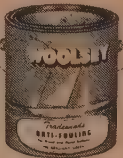
SUDBURY LABORATORY Box 270, South Sudbury, Mass.

STOP EXPENSIVE HAULOUTS!

Conventional bottom paints can't give you the longer-lasting fouling resistance of "TRADEWINDS" Anti-Fouling. Bottoms protected with this highly-toxic Woolsey formula *remain clean*...and this remarkably efficient repellent also insures excellent slip and smoothness. Repaint with "TRADEWINDS" and forget that mid-season haulout.

SERVING AT SEA SINCE 1853

WOOLSEY MARINE PAINTS ®



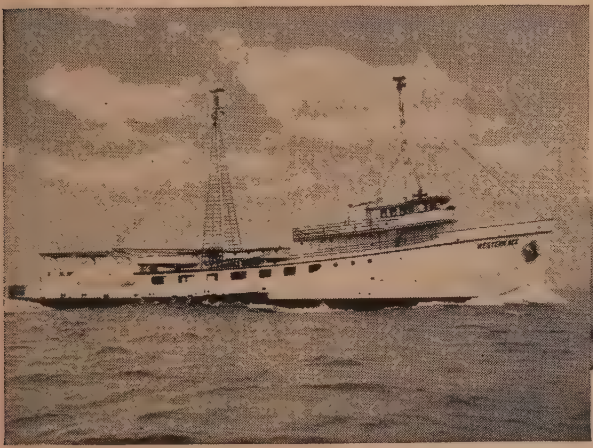
C. A. Woolsey Paint & Color Co. Inc., 229 East 42nd St., N.Y. 17, N.Y.
Chiles Boat Co., 11333 Atlantic Blvd. .... Lynwood, Calif.
Oregon Marine Supply Company, 235 S.W. First Ave. Portland 4, Oregon
Pacific Marine Supply Company, 1217-1223 Western Ave. Seattle, Wash.
San Diego Marine Hardware, 1520 India Street San Diego, California
Weeks-Howe-Emerson Company, 255 Mission Street San Francisco 5, Calif.

Like every captain and owner concerned with cutting operating costs to the bone, Captain McCabe is thoroughly "sold" on the Sperry Magnetic Compass Pilot. "From my many years of experience on both naval and commercial vessels, I sincerely believe the Magnetic Compass Pilot to be the BEST for boats in the Tuna Fishing Fleet. The Western Ace is the second fishing boat on which I have had the pleasure of having this dependable automatic steering equipment. I certainly recommend this pilot to all boats of this type."

Strong praise? Certainly,
but this is what prompts it:

■ When the Western Ace heads for the fishing grounds, no miles are wasted in getting there. The Magnetic Compass Pilot holds a true course *automatically*—through the roughest weather and more accurately than a human helmsman. Both time and fuel are saved.

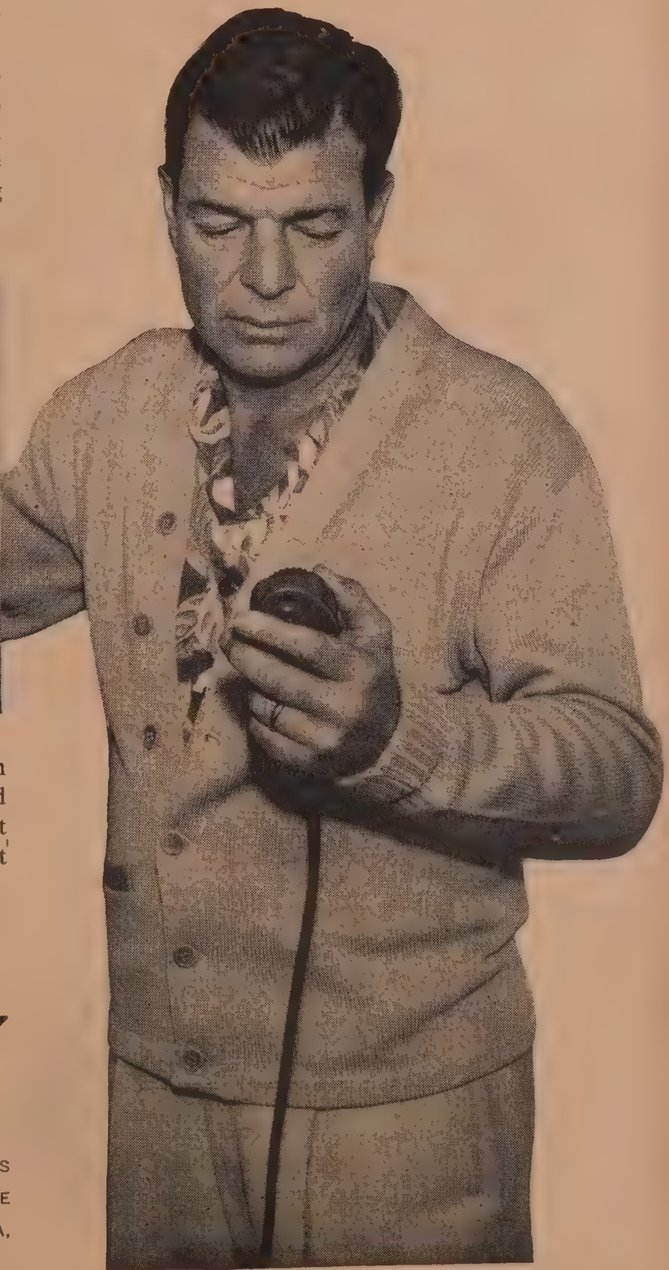
■ And *at* the fishing grounds, the Magnetic Compass Pilot provides additional saving—by freeing more hands for fishing. With the portable remote controller Captain McCabe can set or change course swiftly from vantage points outside the wheelhouse while directing fishing operations.



■ If you'd like to know more about the savings you can expect from a Sperry Magnetic Compass Pilot aboard your fishing vessel, drop a line to our nearest District Office. You'll receive detailed information without obligation.

"...it's the BEST for boats of the Tuna Fishing Fleet."

SAYS RALPH McCABE, CAPTAIN, THE WESTERN ACE



SPERRY GYROSCOPE COMPANY
DIVISION OF THE SPERRY CORPORATION

GREAT NECK, NEW YORK · CLEVELAND · NEW ORLEANS
BROOKLYN · LOS ANGELES · SAN FRANCISCO · SEATTLE
IN CANADA — SPERRY GYROSCOPE COMPANY OF CANADA, LIMITED, MONTREAL, QUEBEC.

CHRYSLER marine engines
Sold and Serviced by

THE NATIONAL SUPPLY COMPANY

FROM OREGON TO ALASKA

To meet your new power requirements, and service your present engine equipment, the Engine Division of National Supply maintains sales and service facilities all along the coast from Portland to Ketchikan. These modern maintenance and overhaul facilities assure you of maximum efficiency and power from your marine engines.

For information on the complete line of Chrysler, Superior and Atlas engines with HP and RPM ratings for every marine power requirement, you can call on any one of these Sales and Service Offices: Astoria, Ore., 131 Seventh St., P.O. Box 57; Halifax, Nova Scotia, Canada, 76 Upper Water Street; Ketchikan, Alaska, 900 Water St., P.O. Box 2021; Portland 14, Ore., 237 S. E. Union Avenue; Seattle 99, Wash., Salmon Bay Terminal; Vancouver, B.C., Canada, 1859 West Georgia Street.

ENGINE DIVISION
THE NATIONAL SUPPLY COMPANY
Plant and General Sales Offices: Springfield, Ohio

ALASKA
OREGON
Superior ENGINES
ATLAS Imperial DIESEL ENGINES

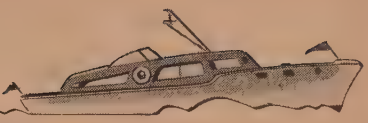
CHIGNIK FISHERIES COMPANY

1826 Exchange Building
SEATTLE 4, WASHINGTON

Packers of

ALASKA CANNED SALMON

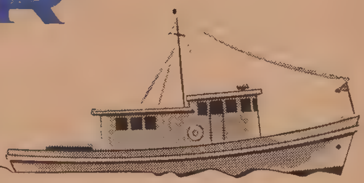
CANNERY: Chignik, Alaska

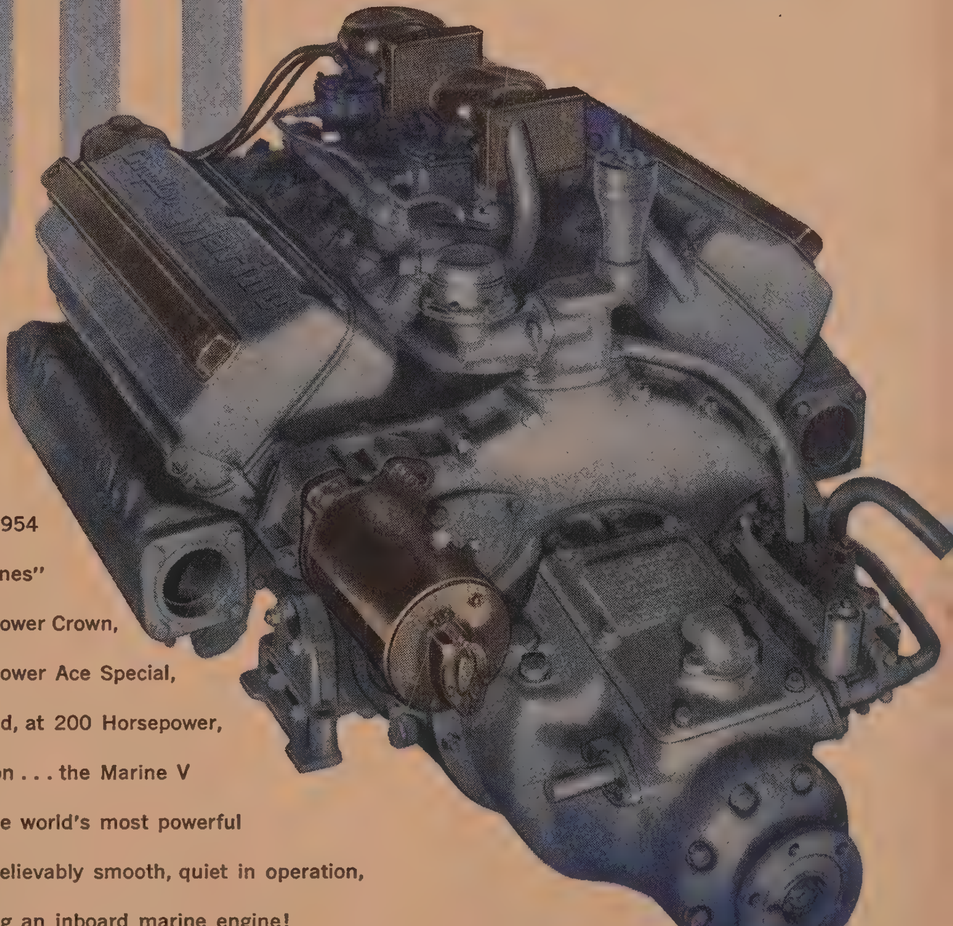


200 HORSEPOWER

FOR PLAY

OR PAY





200 HORSEPOWER CHRYSLER
MARINE V IMPERIAL SPECIAL

yourself a real favor . . . see the 1954
e of "America's No. 1 Marine Engines"
lay. 92 Horsepower Ace, 115 Horsepower Crown,
0 Horsepower Majestic, 105 Horsepower Ace Special,
5 Horsepower Crown Special . . . and, at 200 Horsepower,
modern miracle of marine propulsion . . . the Marine V
perial Special—pound for pound, the world's most powerful
ht-cylinder marine engine! It's unbelievably smooth, quiet in operation,
s virtually any hull capable of taking an inboard marine engine!

See the Imperial Special and all the Chrysler Marine Engines for 1954 . . . at your Chrysler Marine Engine Dealer's . . . at the International Salon, Chrysler Building, New York

r complete details on all Chrysler Marine Engines,
te for 1954 catalogue, Dept. 131 Trenton, Michigan

CHRYSLER

ARINE ENGINE DIVISION, CHRYSLER CORPORATION, TRENTON, MICHIGAN

Fishermen's Packing Corporatio

CANNERS OF PUGET SOUND SALMON

SOCKEYE
Snow Cap
Snowland

COHOE
Olympic
Green Breaker

PINK
Waterfall
Ocean Spray

CHUM
Golden West
Golden Glow

•

FISHERMEN'S PACKING CORP.

SNOW CAP
BRAND
PUGET SOUND
SOCKEYE SALMON
GREEN BREAKER
SELECTED OCEAN CAUGHT
COHOE SALMON
Waterfa
BRAND
PINK
SALMO
WEIGHT OF CONTENTS 1 PO

OFFICE AND CANNE
ANACORTES, WASHINGT

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1954)

OFFICIAL

H. A. Dunlop

International Halibut Fisheries Commission, Fisheries Hall No. 2, University of Washington, Seattle 5, Wash.—Secretary, Edward W. Allen; Director of Investigations, H. A. Dunlop.

International Pacific Salmon Fisheries Commission, Dominion Building, New Westminster, B.C.—Chairman, Robert J. Schoettler, Seattle; Director of Investigations, Loyd A. Royal; Assistant Director, Roy I. Jackson.

L. A. Royal

Inter-American Tropical Tuna Commission, Scripps Institution of Oceanography, La Jolla, Calif.—Chairman, Eugene D. Payne, Los Angeles, Calif.; Secretary, Jose L. Cardona-Cooper, San Jose, Costa Rica; Director of Investigations, Dr. M. B. Schaefer.

M. B. Schaefer

Tuna Research Foundation, 19 Pine Ave., Long Beach, Calif.—Chairman, Albert Vignolo, Jr.; Director, E. L. Morris; Statistician, Leonard Thoreson.

J. T. Gharrett

Pacific Marine Fisheries Commission, 340 State Office Building, 1400 S. W. Fifth Ave., Portland 1, Ore.—Chairman, John C. Veatch; Vice Chairman, Richard S. Croker; Secretary, Robert J. Schoettler; Research Coordinator, John T. Gharrett.

Dominion of Canada, Department of Fisheries, 1110 West Georgia St., Vancouver, B. C.—Chief Supervisor of Fisheries, A. J. Whitmore; Assistant Chief Supervisor, F. Warne; Division Engineer, C. H. Clay; Chief Statistician, B. C. Campbell.

A. J. Whitmore

John L. Farley

United States Fish and Wildlife Service, Department of the Interior, Washington 25, D.C.—Director, John L. Farley; Assistant Director, Arnie J. Suomela.

U. S. F. A. W. S. Pacific Coast Offices

Regional Offices, Region One, Swan Island, Portland 18, Ore.—Director, Leo L. Laythe; Assistant Directors, Samuel J. Hutchinson, Paul T. Quick.

Alaska Regional Office, Box 2021, Juneau, Alaska—Director, Clarence J. Rhode; Asst. Director, C. Howard Baltzo; Supervisor, Fishery Management, Richard F. Shulman; Supervisor of Enforcement, Dan H. Ralston.

Pacific Salmon Investigations, 2725 Montlake Blvd., Seattle 2, Wash.—Chief, Clinton E. Atkinson.

Salmon Cultural Laboratory, Entiat, Wash.—Chief, Roger E. Burrows

Salmon Nutrition Laboratory, Fishery Center, University of Washington, Seattle 5, Wash.—Chief, John E. Halver.

South Pacific Fishery Investigations, 450-B Jordan Hall, Stanford, Calif.—Chief, John C. Marr.

Western Fishery Disease Laboratory, Fishery Center, University of Washington, Seattle 5, Wash.—Chief, Robert R. Rucker.

Fishery Products Laboratory, Ketchikan, Alaska.—Fishery Products Technologist in charge, John A. Dassow.

Fishery Market Development, Ketchikan, Alaska—Fishery Marketing Specialist, in charge, Fred W. Hipkins.

Market News Service, Post Office Bldg., San Pedro, Calif.—Fishery Market Specialist, in charge, Victor J. Samson.

Commercial Fisheries Statistics, Post Office Bldg., San Pedro, Calif.

Technological Laboratory, 2725 Montlake Blvd., Seattle 2, Wash.—Chemist in charge, Maurice E. Stansby.

Fishery Educational Service, 2725 Montlake Blvd., Seattle 2, Wash.—Fishery Products Technologist, in charge, Roy C. Stevens.

Exploratory Fishing and Gear Development, 2725 Montlake Blvd., Seattle 2, Wash.—Fishery Methods and Equipment Specialist, in charge, Jos. Ellson.

Pacific Oceanic Fishery Investigations, P.O. Box 3830, Honolulu, T. H.—Director, Oscar E. Sette.

O. E. Sette

Market News Service, 421 Bell St., Terminal, Seattle 1, Wash.—Fishery Marketing Specialist in charge. C. M. Reardon.

Commercial Fishery Statistics, 421 Bell St., Terminal, Seattle 1, Wash.—Fishery Marketing Specialist, in charge F. M. Wood.

CANNED and FROZEN

Seafood Sales in CHICAGO

are the specialty of the FROHMAN ORGANIZATION. We offer complete trade coverage, a 48 year background of marketing and sales promotion experience in the CHICAGO market, and nationally recognized high standards of service to cooperative and aggressive packers.

Our business is the establishment of repeat volume sales of Canned and Frozen Fish and Seafoods. We are builders of brands. We are prepared to consult with any non-conflicting account to plan a progressive sales program.

L. H. FROHMAN & SONS Sales F Agents

FOR CANNERS AND PACKERS OF FOODS

510 NORTH DEARBORN STREET CHICAGO 10 TELEPHONE SUPERIOR 7-8375

. . . all the facilities for conversion . . .

PURSE SEINE REELS

Now available in one location — complete plant for design and construction of Seine Reels . . . backed by actual experience of our engineers in the fleet this year. Stock Gillnet reels also available for immediate installation. . .

1 CALL FOR ALL GARFIELD 8614

Manufacture of Akervick Gurdies and Trolling Equipment
Drydocking, Repair and Side Tracking Facilities
Design, Construction and Repair of Steel and Wood Commercial Vessels

MARINE CONSTRUCTION AND DESIGN CO.
2300 COMMODORE WAY • SEATTLE
PETER G. SCHMIDT BEN F. JENSEN

Make reservations now for winter side tracking

NO FISHING TODAY

FEWER HAUL-OUTS *with* TRIPLE C PRODUCTS

TRIPLE C
AMERICAN MARINE PAINT CO.
LIFE PRESERVER BRAND
AMP
HI-TEX
AMERICAN MARINE PAINT COMPANY

TRIPLE "C"
CAPE COD COPPER COMPOUND — the world's finest anti-fouling protective coating . . . A complete guard against *all* marine growth.

HI-TEX
A high gloss and color fast marine enamel — formulated for protection against *all* marine elements. Hi-Tex applies with ease for a self leveling mirror-like finish.

Available at All Leading Dealers

50 YEARS OF PROVEN QUALITY
AMERICAN MARINE PAINT CO.

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1954)

GENERAL

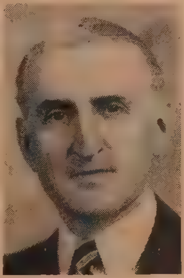
Territory of Alaska, Department of Fisheries, Box 350, Juneau, Alaska—Director, C. L. Anderson; Chairman, Alaska Fisheries Board, Robert C. Kallenberg.

C. L. Anderson

Province of British Columbia, Provincial Department of Fisheries, Parliament Buildings, Victoria, B. C.—Minister, Hon. Ralph Chetwynd; Deputy Minister, George J. Alexander.

G. J. Alexander

State of California, Department of Fish and Game, 926 "J" Street, Sacramento, California—Director, Seth Gordon; Marine Fisheries Branch, Richard S. Croker, Chief.



Seth Gordon

State of Oregon, Fish Commission, State Office Building, Portland 1, Ore.—Chairman, John C. Veatch.

John C. Veatch

State of Washington, Department of Fisheries, Smith Tower, Seattle 4, Wash.—Director, Robert J. Schoettler; Technical Coordinator, Milo Bell.

R. J. Schoettler

Fisheries Research Board of Canada, Ottawa, Canada—Director, Dr. John L. Kask; Pacific Sub-Executive Committee, R. E. Walker, Vancouver, Chairman; Dr. N. M. Carter, Director, Pacific Fisheries Experimental Station, Vancouver, Secretary; Dr. J. L. Hart, Director, Pacific Biological Station, Nanaimo.

John L. Kask

Fisheries Research Institute, Fisheries Hall No. 2, University of Washington, Seattle 5, Wash.—Director, Dr. William F. Thompson.

W. F. Thompson

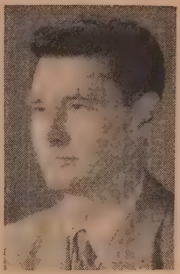
Pacific Fisheries Technologists, 2725 Montlake Blvd., Seattle 2, Wash.—President, Phil Callahan; Secretary-Treasurer, Roy Stevens.

P. Callahan

School of Fisheries, University of Washington, 204 Fisheries Center, Seattle 5, Wash.—Director, Dr. Richard Van Cleve.

R. Van Cleve

Pacific Fishery Biologists, Fisheries Center, University of Washington, Seattle, Wash.—President, J. Gerald Hunter, Pacific Biological Station, Nanaimo, B.C.; Secretary-Treasurer, J. A. R. Hamilton, International Pacific Salmon Fisheries Commission, New Westminster, B.C.



J. G. Hunter

Pacific Fisheries Conference, 71 Columbia St., Seattle 4, Wash.—Chairman, Miller Freeman; Vice-Chairman, Edward W. Allen; Secretary, Montgomery Phister.

Tuna Council of the Americas, Terminal Island, Calif.—Chairman, Montgomery Phister; Vice-Chairman, John T. Real; Secretary, Harold F. Cary.

OPERATORS

Association of Pacific Fisheries, 200 Colman Bldg., Seattle 4, Wash.—President, Vance F. Sutter; Secretary, Dr. E. D. Clark.

V. F. Sutter

Alaska Salmon Industry, Inc., 200 Colman Bldg., Seattle 4, Wash.—President, A. W. Brindle; Managing Director, W. C. Arnold.

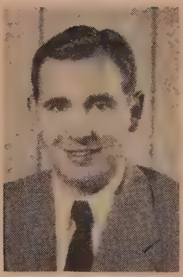
A. W. Brindle

American Seafood Distributors Association, 917 Fifteenth Street, N. W., Washington 5, D. C.—President, Leo Weil, Louisville, Ky.; Counsel, Raymond E. Steele.

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1954)



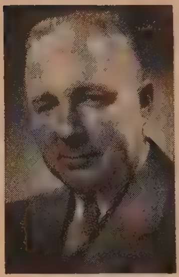
J. S. DeSilva, Jr.

California Fish Canners Association, Ferry Bldg., Terminal Island, Calif. — President, J. S. DeSilva, Jr.; Vice-President, Donald P. Loker; Executive Vice-President and General Manager, R. H. Beaton; Secretary-Treasurer, Wm. C. Morehead.

Canned Salmon, Inc., 200 Colman Bldg., Seattle 4, Wash. — President, Vance Sutter; Chairman, L. A. Petersen; Executive Secretary, Philip T. Carmichael.

Columbia River Salmon & Tuna Packers Association, P.O. Box 60, Astoria, Ore. — Executive Secretary, James H. Cellars.

J. H. Cellars



J. M. Buchanan

Fisheries Association of British Columbia, Room 510, Shelly Bldg., 119 West Pender St., Vancouver, B.C.—Chairman, J. M. Buchanan; Secretary, John Macdonald; Executive Assistant to the Chairman, A. H. Sager.

Monterey Fish Processors Association, Box 1424, Monterey, Calif. —President, Sebastian "Buster" Sollecito; Vice-President James Tolagson; Secretary-Treasurer, George Leutzinger.

S. Sollecito

Fisheries Council of Canada, Suite 33, 46 Elgin St., Ottawa, Ontario—President, Francis Millerd, Vancouver, B. C.

National Canners Association, 1133 20th St., N. W. Washington 6, D.C.—President, Louis Ratzesberger, Jr.; Vice-President, E. E. Willkie; Secretary, Carlos Campbell; Director, Fishery Products Division, Charles R. Carry.

E. D. Clark

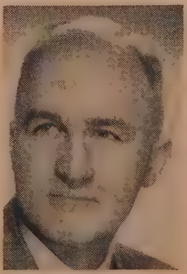
National Canners Association, Northwest Branch, 826 Skinner Bldg., Seattle, Wash.—Director, Dr. E. D. Clark; Chemist and Assistant Director, Dr. R. W. Clough; Chemist, Dr. G. Ivor Jones; Chemist, Walter V. Yonker.

National Fisheries Institute, 1614 Twentieth St., N. W., Washington 9, D. C.—President, F. M. Bundy; General Manager, Charles E. Jackson.

John McCallum

Northwest Fisheries Association, 4 Ferry Dock, Seattle 4, Wash. — President, John McCallum; Vice-President, N. E. Weitkamp; Secretary, Frank Erickson; Treasurer, John A. Lane; Executive Secretary, Charles R. Pollock.

Northwest Salmon Canners Association, Colman Building, Seattle, Wash.—President, Charles Turner; Vice-President, Jack Brennan; Secretary, Joseph R. Fribock.



Chas. Turner

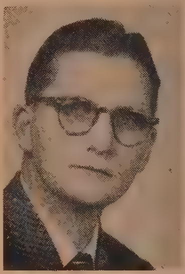
Olympia Oyster Growers Association, P. O. Box 313, Olympia, Wash.—President, Burton J. Bowman; Vice-President, P. D. Northcraft; Secretary-Treasurer, Earl R. Brenner.

Mason Case

Pacific Coast Fish Producers Institute—Chairman, Mason Case, Terminal Island, Calif.; Vice-Chairman, Charles L. White, San Diego, Calif; Secretary-Treasurer, Harold Lokken, Seattle, Wash.

Pacific Coast Oyster Growers Association, Room 4, Ferry Dock, Seattle 4, Wash.—President, Malcolm B. Edwards; Vice-President, Richard N. Steele; Secretary-Treasurer, Charles R. Pollock.

M. B. Edwards



N. R. Christensen

Prince Rupert Wholesale Fish Dealers Association, P. O. Box 9, Prince Rupert, B. C.—Secretary, N. R. Christensen.

Puget Sound Salmon Canners, Inc., 304 Spring Street, Seattle, Wash. — President, Harald Synnestvedt, Jr.; Vice-President, John Mitchell; Treasurer, Norman E. Weitkamp; Executive Secretary, Herald A. O'Neill.

H. Synnestvedt, Jr.

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1954)

Pacific Herring Packers Association, 2408 Commodore Way, Seattle 99, Wash.—President, J. R. Jacobson.

Shrimp Association of the Americas, Brownsville, Texas—President, Pedro Pinson, Mazatlan, Sin., Mex.; Vice-President, Harry Sahlman, Fernandina Beach, Fla.; Secretary, Hector Ferreira, Guaymas, Son.; Treasurer, J. R. Clegg, Brownsville, Texas.

Vancouver Fish Exchange, N. H. B. Fish Dock, Vancouver, B. C.—Secretary, H. M. D. Lambe; Chairman, S. Humphreys.

VESSEL OWNERS

Alaska Native Brotherhood, Juneau, Alaska—Grand President, Patrick Paul, Angoon; Grand Secretary, John Hope, Sitka.

Alaska Herring Shippers Association, 800 American Bldg., Seattle 4, Wash. — President, Bernt Gjerde; Business Manager, G. Bradley Dalton.

H. F. Cary

American Tuna-boat Association, 1 Tuna Lane, San Diego 1, Calif. — General Manager, Harold F. Cary; Director of Research, Dr. Wilbert M. Chapman.

British Columbia Gillnetters Association, Room 207, 26 Lorene St., New Westminster, B. C.—President, Robert Karliner, Jr.; Vice-President, Frank Wilson; Secretary, R. Folley.

R. C. Carpenter

California Commercial Fisherman's Association, Inc., 745 South Seaside, Terminal Island, Calif. — President, R. C. Carpenter; Vice-President, Richard Karlsson; General Manager, Mason Case.

Crab Boat Owners Association, Fishermen's Wharf, San Francisco, Calif. — President, Tom D'Angelo; Secretary, A. Barbera.

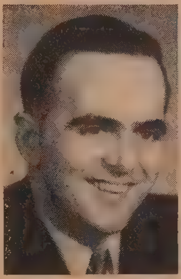
Fishermen's Co-Operative Association, Pier 55, Seattle, Wash. — President, Adam Kanzler; Vice-President, Harry McCool; Secretary-Treasurer, B. G. Johnston.

B. G. Johnston

John Real

Fishermen's Co-operative Association, Berth 73, San Pedro, Calif. — President, Tony Barcott; Vice-President, Carmen Di Massa; General Manager, John Real.

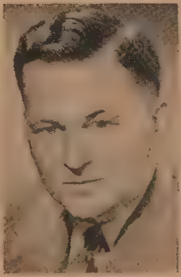
Fishermen's Co-Operative Federation, 2195 Commissioner St., Vancouver 6, B.C. — President, Martin K. Eriksen; General Manager, T. H. Sorensen; Secretary, K. F. Harding.


M. K. Eriksen

Nick Kuljis

Fishermen's Marketing Association of Washington, Pier 59, Seattle, Wash.—President, Andrew Bud Bernard; Secretary-Treasurer, Manager, Nick P. Kuljis.

Fishing Vessel Owners Association of British Columbia, 193 E. Hastings Street, Vancouver, B. C. — President, Capt. Helge Ska Capt. Helge Skarpnes; Secretary-Manager, Harold A. Christenson.


H. A. Christenson

Fishermen's Cooperative Association, 2195 Commissioner St., Vancouver 6, B. C.—President, J. W. Read; Secretary, D. W. Bentley.

Fishermen's Marketing Association, Carson Bldg., Eureka, Calif.—President, Fred Thebus; Vice-President, Arne Grotting; Secretary, W. O. Riley.

H. E. Lokken

Fishing Vessel Owners Association, Pier 59, Seattle, Wash. — President, Sig Hendricks; Manager, Harold E. Lokken.

Juneau Fishing Vessel Owners Association, Box 668, Juneau, Alaska—President, John Lowell; Secretary-Treasurer, Edmund Krause.

Ketchikan Fishing Vessel Owners Association, P.O. Box 688, Ketchikan, Alaska—President, Nels Larsen.

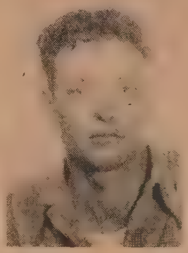
LaConner Fishermen's Cooperative Association, LaConner, Wash.—Secretary-Manager, William Alvord.

Lower California Fisheries Association, 935 West Harbor Drive, San Diego 1, Calif. — President, Anthony S. Chiappe; Business Manager, J. J. Camillo.

J. J. Camillo

Massett Cooperative Association, 2195 Commissioner St., Vancouver 6, B. C.— President, Noel Taylor; Secretary, George A. Hawkes.

Monterey Fishermen's Association, Monterey, Calif. — President, Leonard Goulart; Secretary-Treasurer, Ernest Martins.


L. Goulart

Always

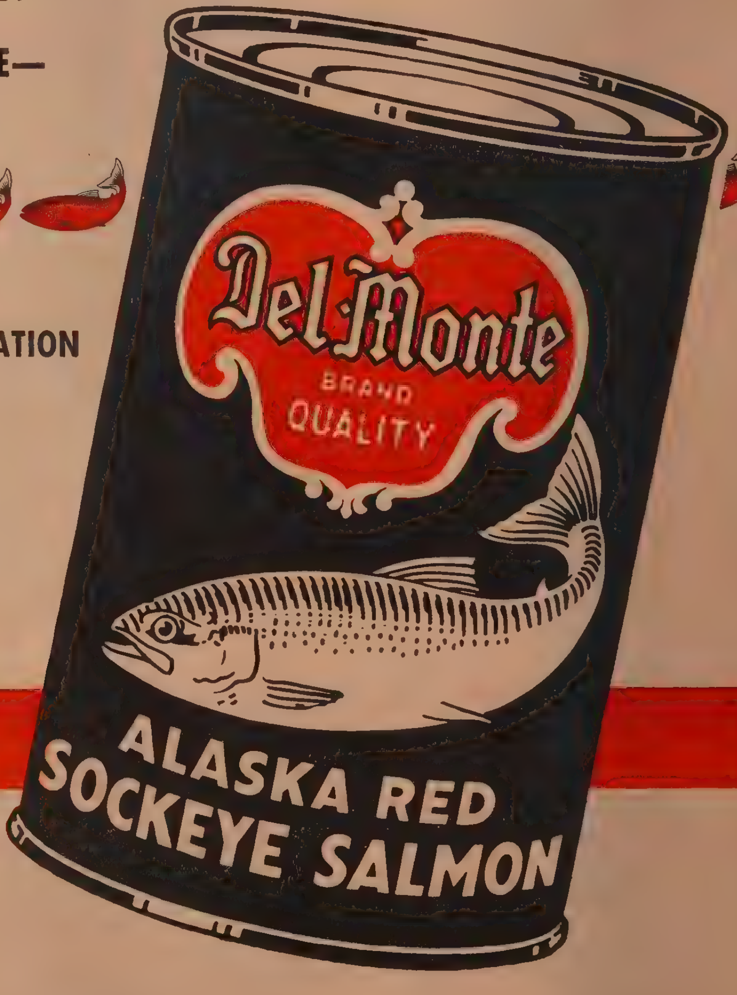
the same world-famous quality year in—year out!

DEL MONTE Salmon is packed with careful control, the same rigid requirements that distinguish all DEL MONTE Brand Products. You can be sure your customers will give it first preference.

Years of effective advertising have indelibly stamped the familiar DEL MONTE Shield in the minds of millions of consumers. It's the label they remember...and instantly recognize as the brand that puts *flavor first*...ALWAYS!

DEPEND ON DEL MONTE—
YOUR CUSTOMERS DO!

CALIFORNIA PACKING CORPORATION
San Francisco, California



DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1954)

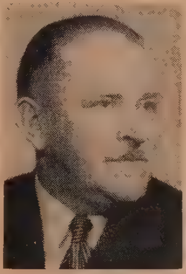
Monterey Purse Seine Association, 9 Municipal Wharf, Monterey, Calif. —President, Frank J. Cardinale; Vice-President, Sal Genovese; Secretary, Horace Balbo; Treasurer, John G. Spadero.

F. J. Cardinale

Myrth Sarvela

Northern Fishing Vessel Owners Association, Sitka, Alaska — President, Pete Crews; Vice-President, Frank Ward; Secretary, Myrth Sarvela.

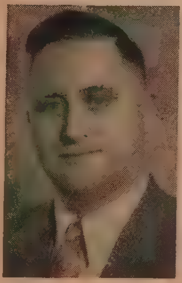
Off-Shore Fishing Vessel Owners Association, P. O. Box 838, 51 Ninth St., Astoria, Ore. —President, Arthur J. Anderson; Treasurer, Sverre Koppen.


A. J. Anderson

E. L. Haarsager

Pacific Coast Purse Seiners' Association, Pier 59, Foot of Pike Street, Seattle 1, Wash. — President, E. L. Haarsager; Vice-President, Conrad Ness; Secretary, Arthur Edwards.

The Prince Rupert Fishing Vessel Owners' Association, P. O. Box, Prince Rupert, B. C.— President, Harold Helland; Secretary, Hans Petersen.


H. Helland

Prince Rupert Fishermen's Cooperative Association, P. O. Box 340, Prince Rupert, B.C.—President, Martin Eriksen; Secretary and Manager, K. F. Harding.

Puget Sound Gillnetters Association, Everett, Wash.—President, Joe Burrows; Vice-President, Frank Riley; Secretary-Treasurer, William F. Fortson.

Purse Seine Vessel Owners Association, 5301 North Ruby St., Tacoma, Wash.— President, Jack Repanich; Secretary, Nick Mladinich.

J. Repanich

San Diego Commercial Fishing Boat Owners, Inc., 4904 N. Harbor Drive, San Diego 6, Calif.— President, Nic Cordileone; Secretary-Treasurer, E. L. Bradley.

San Francisco Crab Boat Owners Association, 2907 Jones St., San Francisco, Calif.—President, Gaetano DiAngelo; Vice-President, Tony Caruso; Secretary-Treasurer, Emil Barbaro.

San Francisco Purse Seine Vessel Owners Association, 350 Jefferson St., San Francisco 11, Calif.—President, Guiseppe Torrente; Vice-President, Frank Gandolfo.

Southern California Commercial Fishing Boat Owners, Inc., 5355 E. Fourth, Long Beach, Calif. — President, William J. Wagner.

Southern California Fishermen's Association, 418 Harbor Lane, San Diego, Calif. — President, Victor Nigro; Vice-President, Jimmie Nigro; Secretary-Treasurer, Louis V. Nigro.

Victor Nigro

FISHERMEN AND CANNERY UNIONS

G. Johansen

Alaska Fishermen's Union, 84 Union St., Seattle — Secretary - Treasurer, George Johansen.

British Columbia Native Brotherhood, 718 Ford Bldg., 193 Hastings East, Vancouver, B. C.— Business Agent, William Scow.

Cannery Workers Union of the Pacific, AFL, 450 Seaside Avenue, Terminal Island, Calif. —President, James Waugh.

Jas. Waugh

Cannery Workers & Fishermen's Union, 640 State St., San Diego 1, Calif. — Secretary-Treasurer, Lester Balinger.

Columbia River Fishermen's Protective Union, 166 Tenth St., Astoria, Ore. —Executive Secretary, Robert J. Hicks.

R. J. Hicks

Deep Sea Fishermen's Federal Union of B. C., Prince Rupert, B. C. — President, Hilmar Mork; Secretary, W. H. Brett.

Deep Sea Fishermen's Union of the Pacific, 5215 Ballard Ave., Seattle, Wash. — Secretary - Treasurer, Harold Grotle; Seattle Agent, Helge Pedersen; Ketchikan Agent, John Caspersen.

VITA BRAND

TRADE MARK REG.

Importers, Producers, Packers *and* Smokers *of All Kinds of* FRESH *and* SALT WATER FISH

CAVIAR
FROZEN SALMON
CHUBS
SABLEFISH
BUTTERFISH
MILD CURED SALMON
SALMON ROE

SALT HERRING
PICKLED HERRING
ANCHOVY PASTE
HERRING FILLETS
SARDINES
ANCHOVIES
HALIBUT

RIVER STURGEON
LAKE STURGEON
TROUT
CISCOES
SPOONBILL STURGEON
WHITEFISH
WHITEFISH ROE

VITA FOOD PRODUCTS, Inc.

Main Office
644-654 GREENWICH STREET NEW YORK, N. Y.

Producers: Port Vita, Port Oceanic, Sitka, Ketchikan & Port Conclusion, Alaska
Plants: New York, Brooklyn, Philadelphia, Chicago, Chestertown, Md., Alaska

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1954)

C. F. Snyder

Fish Cannery Workers and Fishermen's Union of the Pacific, San Francisco and Moss Landing Bay Areas Local, 257 Fifth St., Richmond 5, Calif.—Secretary-Treasurer, Charles F. Snyder; Assistant Secretary-Treasurer, Pete Guzman. San Francisco Branch, 16th and Capp Sts.; Moss Landing Branch, Box 34, Moss Landing, Calif.

Fisheries Division, International Longshoremen's & Warehousemen's Union, 150 Golden Gate Avenue, San Francisco, Calif. Regional Offices: Southern California, Director, William Lawrence, 5851 Avalon Blvd., Los Angeles, Calif.; Northern California, Director, William Chester, 150 Golden Gate Ave., San Francisco, Calif.; Northwest and Alaska, Director, William Gettings, 84 Union St., Seattle, Wash.

Local 3, Secretary, Robert Cummings, 84 Union Street, Seattle, Wash.

Local 16-C, Secretary, Dora Bigornia, Cannery Workers, Box 1195, Juneau, Alaska.

Local 22 Secretary, Max L. Haube, Box 237, Cannery Workers, Petersburg, Alaska.

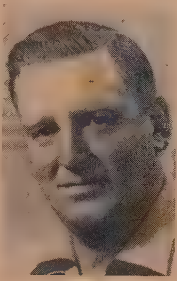
Local 30 Secretary, W. M. McCall, Box 379, Ketchikan, Alaska.

Local 33 Secretary, Anthony Sokolich, 339 West 7th St., San Pedro, Calif.

Local 37 Secretary, Matias L. Lagunilla, Alaska Cannery Works, 213 Main St., Seattle, Wash.

Local 38 Secretary, Mildred Gesler, 17 Commercial St., Eureka, Calif.

Local 44—President, John R. Brown; Secretary, Marvin Little, Lummi Island, Wash.



J. R. Brown

Local 61-C Cannery Workers, Secretary, Ruby Currie, Box 1535, Ketchikan, Alaska.

Local 64, Secretary, Flora Mather, Metlakatla, Alaska.

Local 65 Secretary, Edith Bean, Hoonah, Alaska.

Fishermen's Union Local 33, I. L. W. U., 339 7th St., San Pedro, Calif.—Secretary, Anthony D. Sokolich.

Paul E. Graves

Otter Trawlers Union, Astoria—President, Peter A. Peldo; Secretary-Treasurer, Paul E. Graves.

Seine & Line Fishermen's Union of L. A., 261 West 7th St., San Pedro, Calif.—Business Agent-Secretary, John Calise.

Seine and Line Fishermen's Union of Monterey, 233 Alvardi St., Monterey, Calif.—President, Thos. P. Flores; Secretary-Business Agent, John Crivello.

United Fishermen and Allied Workers Union, 138 East Cordova St., Vancouver, B. C.—President, Reg Payne; Secretary, Homer Stevens; Business Agent, Alex Gordon.

Reg Payne

United Fishermen of Alaska, A. F. L., P. O. Box 501 A, Kodiak, Alaska—President, A. J. Cichoski; Secretary, P. J. Kerrigan.

STARR NETS

STARR NETTING—STAR PERFORMANCE

Write for prices on cotton, linen and Nylon (made from Bonded Nylock twine) netting.

The Symbol of QUALITY

Faith, established only through long, dependable service — that's the *real* story behind Starr Netting and the reputation of quality it has earned in over the past 50 years.

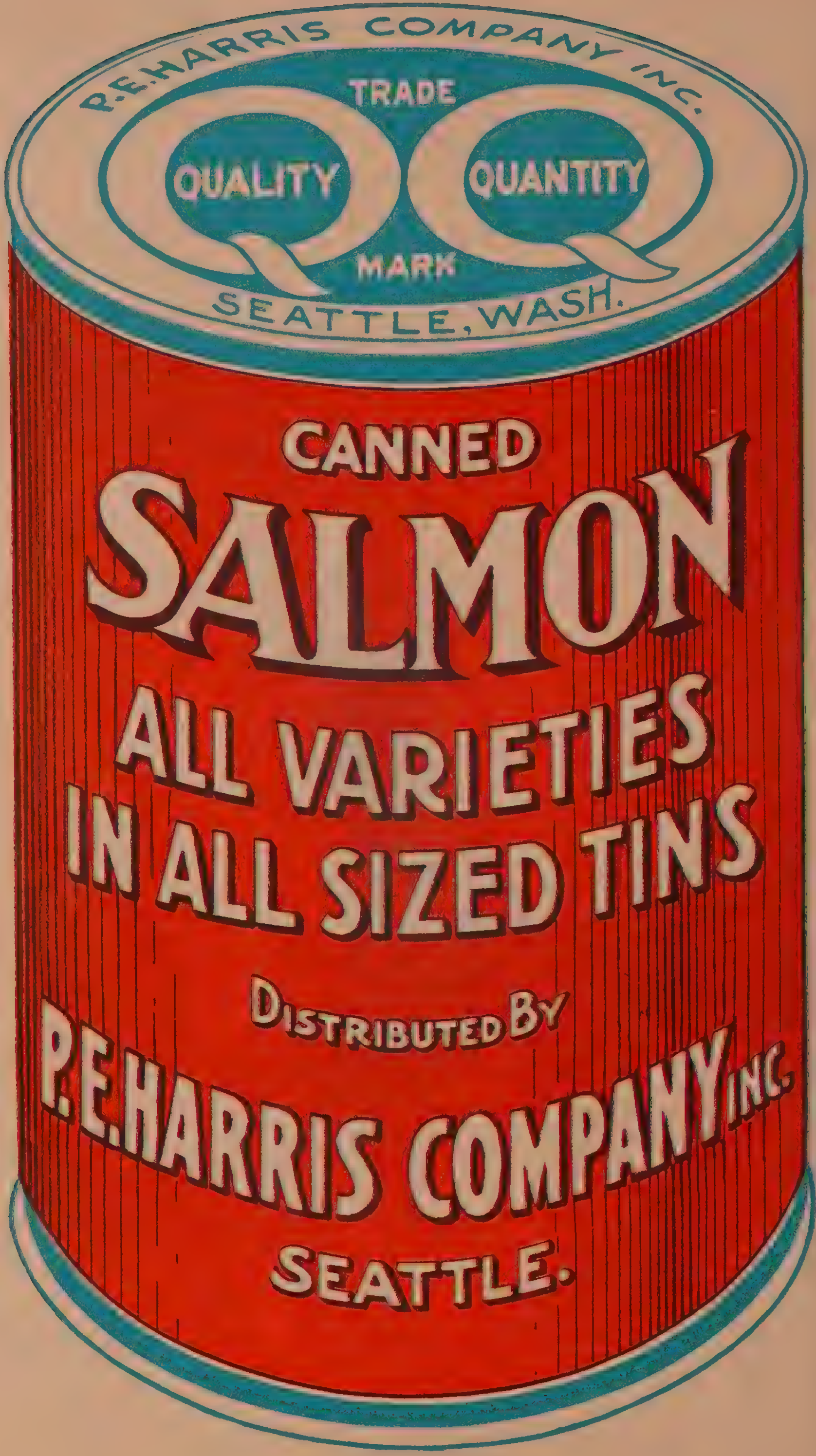
Stocked and Distributed by

CONSOLIDATED NET & TWINE COMPANY

Fisherman's Terminal, Seattle 99, Wash., Tel. Alder 6387

A. M. STARR NET CO.

EAST HAMPTON • • • CONN.


P.E.HARRIS COMPANY INC.
TRADE
QUALITY
QUANTITY
MARK
SEATTLE, WASH.
CANNED
SALMON
ALL VARIETIES
IN ALL SIZED TINS
DISTRIBUTED BY
P.E.HARRIS COMPANY INC.
SEATTLE.

OPERATING PLANTS IN ALASKA

HAWK INLET

FALSE PASS

SALMON

North American canned salmon production in 1953 totalled 5.7 million cases, almost exactly the same quantity as in 1952, despite the disastrous season in Alaska.

Excellent production in British Columbia, with a very good pack in Washington, combined to off-set the shrinkage in Alaska.

Value of the salmon pack of 1953, however, shrank by $8.6 million, due to lower prices across-the-board, plus the fact that the pack of 1952 contained a larger proportion of the higher-priced varieties.

VOLUME was sustained in the 1953 Pacific production of canned salmon by virtue of exceptionally good fishing in British Columbia and on Puget Sound, and despite disaster in Western and Southeast Alaska.

Value of the pack, however, was down sharply, with the pack priced at $118,751,000 for the Coast as a whole, off $8,637,000 from the $127,388,000 valuation of the year before.

Alaska Suffers Loss

The loss all came in Alaska—save for a little on the Columbia River. British Columbia was up handsomely, and Washington showed a nice gain—but Alaska came a terrific cropper, value of the Territory's pack falling by almost exactly $12,000,000 from the level of the year before, which in its turn was far below the 1951 high.

In British Columbia the 1953 value of $35,060,000 represented a handsome increase of $7,309,000 from the year before; and Washington's 1953 valuation of $18,680,000 was up a cool $2,800,000 from 1952.

The Columbia River's pack valuation was off approximately three-quarters of a million from the year before.

The decline in value traces primarily to lower prices for virtually all items, coupled with the fact that the 1953 pack contained a higher percentage of the cheaper grades of salmon than did that of the preceding year.

1953 Pack's Valuation 40 Million Under High

Decline of $40,000,000 in the valuation of the North American canned salmon pack was registered in a period of only two years, from the all-time high of $158,899,000 in 1951 to $118,751,000 in 1952.

Of this two-year decline, Alaska suffered a $23,668,000 loss in value, from a pack worth $84,649,000 in 1951. So far as Alaska is concerned, its all-time high in salmon pack value came in 1948, with production worth $100,694,000 at prices prevailing in that year. This stands as $39,607,000 above the 1953 valuation.

Thus in five years Alaska salmon canning sustained a decline of 40% in value.

Pack decline from 1948 to 1953 stands at 27.6%.

Short of 10-Year Average

The 1953 pack for the entire Pacific Coast fell short of the 10-year average, which includes most of the "failure" years since 1912, by 619,000 cases.

Of the species, Chum was the only one in which the 1953 pack exceeded

1953-Pacific Canned Salmon Packs and Values-1953

DISTRICT	Red, Sockeye or Blueback		PINK		CHUM		SILVER or COHO		KING or CHINOOK and Steelhead		TOTAL	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Alaska	982,090	$27,996,373	960,969	$17,439,908	797,048	$11,214,236	129,922	$2,894,714	55,541	$1,442,103	2,925,570	$60,987,334
Washington	168,533	6,067,188	447,504	8,241,994	141,849	2,009,480	68,603	1,561,928	21,012	800,160	847,501	18,680,750
Oregon	2,615	94,140	578	10,730	5,257	77,118	21,921	522,832	96,461	3,302,532	126,832	4,007,352
California	...	...	...	...	...	...	97	2,425	339	13,000	436	15,425
Total U. S. A.	1,153,238	34,157,701	1,409,051	25,692,632	944,154	13,300,834	220,543	4,981,899	173,353	5,557,795	3,900,339	83,690,861
British Columbia	510,100	15,303,000	793,382	11,900,730	392,716	5,105,308	110,170	2,423,740	14,901	327,822	1,821,269	35,060,600
Grand Total	1,663,338	49,460,701	2,202,433	37,593,362	1,336,870	18,406,142	330,713	7,405,639	188,254	5,885,617	5,721,608	118,751,461

NOTE:-Salmon frozen in Alaska and canned elsewhere are included in the Alaska pack.

Halferty

SEATTLE U.S.A

1953 -PACIFIC CANNED SALMON PACK- 1953

(Figures Reduced to Uniform Basis of 48-lb (full case) units. Alaska pack includes fish frozen in Alaska and canned elsewhere.)

Species	Alaska	Puget Sound	Columbia River	Coastal Areas	Total U.S.	British Columbia	Grand Total
Red or Sockeye	982,090	167,822	2,871	455	1,153,238	510,100	1,663,338
Pink	960,969	447,394	680	8	1,409,051	793,382	2,202,433
Chum or Keta	797,048	124,302	11,671	11,133	944,154	392,716	1,336,870
Coho or Silver	129,922	66,657	23,547	417	220,543	110,170	330,713
Chinook or King	55,339	3,801	93,869	981	153,990	12,177	166,167
Steelhead	202	...	19,161	..	19,363	2,724	22,087
Total	2,925,570	809,976	151,799	12,994	3,900,339	1,821,269	5,721,608

the five-year average, and that by only 30,000 cases.

It is perhaps significant that Chum packs during the past four years have all exceeded the 10-year average pack for this species.

American Salmon Pack Is Lowest Since 1921

Despite the good yield on Puget Sound, the 1953 production of canned salmon was the least supply that the United States' supply has fallen bein any year since 1921. The national total of 3,900,000 cases in 1953 was the first time since 1921 that the United States' supply has falled below the 4-million mark.

Had the Alaska partial failure fallen in an even-numbered year the statistical picture would have been far bleaker than was the case at the end of 1953. Without the Puget Sound Pink pack, which comes only in the odd-numbered years, the national salmon pack total would have been the lowest since salmon packing emerged from its preliminaries.

Industry and government as well recognized the crisis.

Corrective measures cannot be wholly effective for years.

Prospect for the immediate future is for limited supplies.

NORTH AMERICAN CANNED SALMON PACK

Year	Red, Sockeye or Blueback	Pink	Chum or Keta	Medium Red Coho or Silverside	King or Chinook	Steelhead Trout	Total Cases	Year
1898	1,594,162	109,399	51,530	282,589	398,564	26,277	2,462,521	1898
1899	2,153,388	401,892	61,932	261,071	334,974	11,994	3,225,251	1899
1900	2,046,908	232,022	155,208	208,026	338,493	20,597	3,001,254	1900
1901	3,801,730	585,017	86,230	126,535	455,395	20,000	5,074,907	1901
1902	2,702,045	549,602	313,603	227,031	379,641	8,593	4,180,515	1902
1903	2,231,555	564,507	61,232	330,319	403,836	7,251	3,598,700	1903
1904	1,950,949	299,333	168,235	168,235	444,472	9,868	3,041,092	1904
1905	3,488,322	253,559	138,642	269,806	443,794	9,822	4,603,945	1905
1906	2,122,204	416,602	450,151	397,346	424,974	6,500	3,817,777	1906
1907	1,707,813	1,114,100	272,135	397,786	354,209	6,604	3,852,647	1907
1908	2,186,325	726,656	303,837	386,745	379,171	11,863	3,994,597	1908
1909	3,671,555	882,410	218,987	373,567	262,554	17,382	5,426,455	1909
1910	2,274,780	589,043	555,908	521,966	372,901	5,576	4,320,174	1910
1911	1,869,927	2,373,595	592,790	676,141	627,714	8,618	6,104,887	1911
1912	2,544,435	1,556,128	808,630	621,817	426,338	7,198	5,956,953	1912
1913	4,643,425	2,392,166	432,812	300,033	285,472	9,539	8,063,447	1913
1914	3,121,964	1,222,013	1,200,433	579,980	509,100	11,292	6,644,782	1914
1915	2,492,865	2,825,570	1,107,707	551,821	641,979	29,650	7,639,592	1915
1916	2,432,048	2,036,077	1,500,332	715,815	646,341	24,999	7,355,612	1916
1917	3,248,843	3,929,332	1,648,313	588,749	673,980	35,677	10,124,894	1917
1918	2,987,710	2,953,245	2,175,031	838,088	697,140	41,086	9,692,300	1918
1919	1,707,846	2,426,414	2,367,481	793,175	704,195	24,392	8,023,503	1919
1920	1,892,691	2,138,959	1,175,001	361,566	705,050	16,054	6,289,321	1920
1921	2,034,310	1,038,090	359,947	362,943	419,508	11,362	4,226,160	1921
1922	2,480,811	2,241,760	908,283	510,919	353,588	26,640	6,522,001	1922
1923	2,309,142	3,371,917	1,120,591	534,225	389,802	27,757	7,753,434	1923
1924	1,902,832	3,295,739	1,835,251	542,682	406,096	31,270	7,990,543	1924
1925	1,581,792	3,111,320	1,803,371	667,817	550,071	17,248	7,731,610	1925
1926	2,550,771	4,101,422	1,762,134	607,778	485,783	86,233	9,544,126	1926
1927	1,738,054	2,241,304	1,217,338	642,522	538,574	33,377	6,411,169	1927
1928	2,214,498	3,583,433	2,165,652	602,203	354,798	17,492	8,938,076	1928
1929	2,100,787	3,775,764	1,541,213	564,826	375,497	24,821	8,382,908	1929
1930	1,710,018	4,266,301	1,085,351	758,451	427,282	18,509	8,265,912	1930
1931	2,084,385	3,890,755	671,574	388,140	418,483	13,679	7,467,016	1931
1932	2,484,459	2,341,966	1,313,537	446,706	394,830	14,386	6,995,884	1932
1933	2,579,891	3,259,341	1,021,547	402,107	343,442	19,486	7,625,814	1933
1934	3,354,863	4,261,262	1,362,905	596,951	352,752	16,183	9,944,916	1934
1935	1,232,852	4,139,114	1,303,216	596,117	279,693	15,484	7,566,476	1935
1936	2,968,184	5,181,954	1,846,675	533,285	313,795	20,350	10,864,243	1936
1937	2,494,302	4,532,487	1,233,999	369,916	385,986	18,412	9,035,372	1937
1938	3,125,176	3,623,435	1,387,245	595,380	234,520	16,283	8,982,039	1938
1939	2,280,088	3,412,392	1,054,858	472,239	254,930	26,090	7,500,597	1939
1940	1,402,999	3,124,292	1,553,389	592,395	286,485	34,443	6,994,003	1940
1941	1,763,852	5,218,427	1,770,225	831,279	422,989	36,597	10,043,369	1941
1942	1,860,044	3,088,724	1,723,193	616,687	343,369	26,507	7,658,524	1942
1943	2,169,091	2,913,760	1,258,239	377,160	196,000	19,357	6,933,608	1943
1944	1,869,365	2,478,750	1,239,548	383,040	223,088	23,143	6,216,934	1944
1945	1,556,200	3,374,192	1,041,387	457,680	194,056	22,125	6,645,640	1945
1946	1,893,469	2,176,817	1,267,478	316,968	230,811	21,880	5,907,423	1946
1947	2,197,569	2,962,281	1,127,496	438,087	366,620	25,325	7,117,378	1947
1948	1,994,733	1,630,411	1,551,190	577,726	354,475	26,027	6,134,562	1948
1949	1,335,248	3,946,309	946,615	492,871	229,031	11,305	6,961,380	1949
1950	1.698.290	1.544.327	1,816,745	468,768	215,114	13,777	5,757,022	1950
1951	1,364,419	2,737,445	1,443,330	779,725	258,530	18,517	6,601,966	1951
1952	1,862,844	1,850,890	1,375,214	461,629	168,150	22,763	5,741,490	1952
1953	1,663,338	2,202,433	1,336,870	330,713	166,167	22,087	5,721,608	1953
10 Yr. Average	1,743,547	2,490,386	1,314,587	470,721	240,604	20,695	6,280,522	10 Yr. Average

NOTE:– Figures represent full cases of 48 lbs. net. "Average" is for the last ten years. Figures for the last year shown are from "Pacific Fisherman's" compilation; those for previous years have been revised from official data.

canned **S***almon*

from the **H***eight of the run*

handled **I***ntelligently*

by people of **E***xperience*

with profound **L***oyalty to customers*

WALTER P. SHIEL & CO.
CANNED SALMON DISTRIBUTORS
5506 WHITE-HENRY-STUART-BUILDING
SEATTLE 1, WASHINGTON

SAN JUAN
ALASKA RED SOCKEYE
SALMON

CALVERT
PINK
Alaska
SALMON

Ship Ahoy
ALASKA CHUM
SALMON

Representing

EGEGIK PACKING CO.
INTERCOASTAL PACKING CO.
NORTHERN COMMERCIAL CO.

SAN JUAN FISHING & PACKING CO.
TODD PACKING CO.
UGANIK FISHERIES, INC.

SALMON

PACK OF ALASKA CANNED SALMON BY DISTRICTS

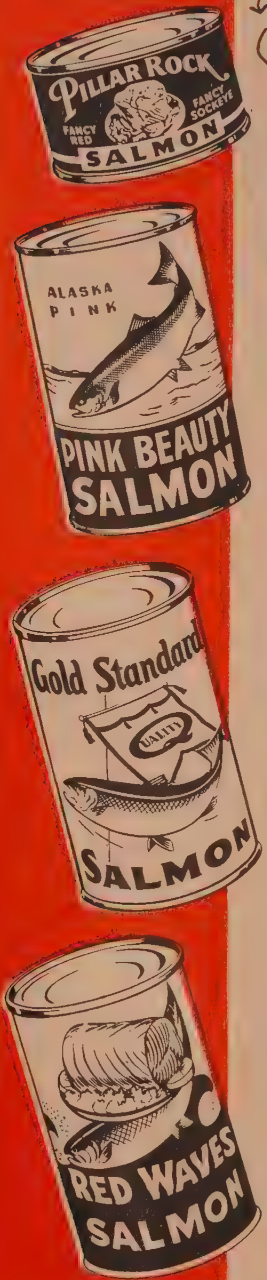
Year	SOUTHEAST ALASKA							CENTRAL ALASKA							WESTERN ALASKA									
	Plants Operated	Red	Pink	Chum	Coho	King	Total Cases	Plants Oper.	Red	Pink	Chum	Coho	King	Total Cases	Plants Oper.	Red	Pink	Chum	Coho	King	Total Cases	# Plants Operated	TOTAL CASES	Year
1905	13	207,375	142,008	37,685	41,079	5,460	433,607	9	345,575	3,235	. . .	16,518	6,427	371,755	25	1,021,478	23,354	4,287	9,797	30,238	1,089,154	47	1,894,516	1905
1906	20	250,567	326,713	131,405	84,149	2,396	795,230	8	451,659	3,188	. . .	10,316	7,861	473,024	19	798,504	19,866	123,407	16,278	20,680	978,735	47	2,246,989	1906
1907	22	177,149	542,268	140,392	58,632	1,289	919,730	8	482,968	10,255	. . .	15,258	14,355	522,836	18	657,687	18,244	44,025	11,784	27,794	759,534	48	2,202,100	1907
1908	23	198,366	592,638	180,204	48,963	2,552	1,022,723	8	377,101	30,661	. . .	11,543	6,416	425,721	19	1,087,211	20,834	38,309	8,426	14,824	1,169,604	50	2,618,048	1908
1909	19	280,542	455,999	83,001	39,920	857	860,319	8	358,285	5,581	. .	10,275	16,913	391,054	18	1,074,667	3,293	37,711	6,361	30,264	1,152,296	45	2,403,669	1909
1910	23	282,265	494,363	231,735	82,620	402	1,091,385	10	364,875	31,797	131	19,928	15,786	432,517	19	825,447	31,348	22,352	11,641	24,087	914,138	52	2,438,777	1910
1911	32	238,895	969,866	290,843	100,793	1,441	1,601,838	11	412,647	24,143	2,008	17,326	15,862	471,986	21	669,163	27,347	10,969	11,585	28,075	747,139	64	2,820,963	1911
1912	51	254,851	1,053,847	589,578	134,914	6,607	2,039,777	14	422,347	136,891	29,591	19,782	14,198	622,809	22	1,227,060	114,247	19,359	15,088	21,789	1,397,543	87	4,060,129	1912
1913	42	190,685	1,299,400	254,689	58,071	1,006	1,803,851	14	364,253	49,299	5,038	13,284	15,393	447,267	23	1,419,381	54,217	7,927	6,022	11,768	1,505,315	79	3,756,433	1913
1914	45	294,842	872,504	597,435	112,163	12,087	1,889,031	14	395,110	195,830	17,693	36,739	11,132	656,504	23	1,511,622	29,489	47,350	8,890	24,946	1,622,297	82	4,167,832	1914
1915	46	229,709	1,820,171	375,260	90,161	25,135	2,540,436	17	500,000	43,951	39,404	26,062	22,978	632,395	23	1,192,248	6,251	69,744	10,347	37,581	1,316,171	86	4,489,002	1915
1916	54	182,075	1,335,291	505,405	182,405	18,482	2,223,658	19	572,096	371,845	64,320	55,298	22,160	1,085,719	27	1,365,271	46,410	145,513	27,481	25,537	1,610,212	100	4,919,589	1916
1917	60	202,951	2,149,075	750,187	152,538	29,657	3,284,408	26	725,925	137,955	86,764	36,065	19,236	1,005,945	29	1,556,005	11,436	40,762	5,105	18,659	1,631,967	113	5,922,320	1917
1918	75	226,108	2,034,997	954,498	152,689	17,248	3,385,540	29	662,829	358,491	313,196	47,904	21,818	1,404,238	30	1,729,622	24,724	98,965	15,979	18,301	1,887,591	134	6,677,369	1918
1919	75	240,208	1,521,897	1,146,943	169,300	30,016	3,108,364	30	437,341	107,924	163,530	54,596	12,075	775,466	28	526,794	27,613	37,989	6,242	109,642	707,280	133	4,591,110	1919
1920	80	199,829	1,026,862	830,538	112,178	32,869	2,202,276	35	533,122	510,350	148,122	67,744	20,417	1,279,755	28	742,829	76,222	44,048	12,389	37,990	913,478	143	4,395,509	1920
1921	30	105,084	416,958	182,272	90,845	9,034	804,193	27	596,200	13,116	28,305	11,425	10,225	659,271	27	1,057,510	10,397	37,029	7,513	29,060	1,141,509	84	2,604,973	1921
1922	57	121,652	1,313,280	425,947	128,023	5,777	1,994,679	36	567,576	331,005	88,321	36,623	8,930	1,032,455	28	1,386,169	13,261	48,228	9,666	16,897	1,474,221	121	4,501,355	1922
1923	67	178,962	2,257,768	434,490	129,990	12,857	3,014,067	39	441,774	197,291	72,821	32,940	11,537	756,363	30	1,257,594	77	19,834	822	14,583	1,292,910	136	5,063,340	1923
1924	65	192,806	1,686,884	799,215	110,002	8,259	2,797,166	38	442,876	892,667	192,901	68,883	10,593	1,607,920	31	814,042	33,517	35,067	2,322	14,889	899,837	134	5,305,923	1924
1925	62	151,140	1,701,849	835,599	94,539	12,493	2,795,611	37	364,721	402,801	199,797	68,267	19,289	1,054,875	30	549,429	590	29,999	1,393	18,992	600,403	129	4,450,898	1925
1926	61	173,891	2,158,699	618,397	96,389	10,679	3,058,055	43	630,505	1,144,180	243,808	104,309	23,683	2,146,485	28	1,352,691	35,470	40,238	1,829	18,114	1,448,342	132	6,652,882	1926
1927	62	115,664	581,728	224,696	114,331	9,131	1,045,823	47	320,159	833,028	253,410	138,243	42,948	1,587,788	29	884,740	. . .	29,262	55	18,404	932,461	138	3,566,072	1927
1928	60	106,793	2,137,796	566,689	145,323	5,596	2,962,197	62	431,924	643,816	378,499	152,066	32,567	1,638,872	29	1,405,344	3,852	46,316	497	13,032	1,469,041	151	6,070,110	1928
1929	59	161,580	1,541,463	290,742	97,850	6,982	2,098,617	70	455,997	1,028,790	498,873	68,538	36,526	2,088,544	30	1,075,473	253	71,261	5,862	30,232	1,183,081	159	5,370,242	1929
1930	57	216,743	2,296,270	283,553	155,844	10,894	2,963,304	68	270,310	839,751	281,111	170,741	32,123	1,594,036	27	361,734	14,631	31,336	3,403	20,543	431,647	152	4,988,987	1930
1931	41	148,485	2,038,388	277,225	88,841	14,926	2,567,865	49	439,572	940,124	193,131	81,275	27,567	1,681,669	25	1,107,725	. . .	66,553	92	8,631	1,183,001	115	5,432,535	1931
1932	31	140,356	1,380,093	582,290	88,293	23,637	2,214,669	34	659,539	720,893	145,660	60,363	32,317	1,618,772	22	1,304,832	15,587	93,178	695	12,755	1,427,047	87	5,260,488	1932
1933	38	81,122	1,477,608	425,869	95,629	8,130	2,088,358	31	486,528	703,696	207,363	64,548	23,792	1,485,927	23	1,614,721	2,139	25,013	1,456	9,084	1,652,413	92	5,226,698	1933
1934	47	104,413	2,622,186	393,904	159,509	15,606	3,295,618	45	707,754	1,198,457	307,649	74,832	27,005	2,315,697	22	1,813,835	1,959	33,502	1,219	8,756	1,859,271	114	7,470,586	1934
1935	46	159,506	2,209,373	541,152	141,501	11,496	3,063,028	44	391,088	1,045,155	302,011	47,198	24,338	1,809,790	9	272,581	. . .	9,567	219	641	283,008	99	5,155,826	1935
1936	46	219,531	2,959,774	784,455	136,043	22,105	4,121,908	46	839,243	1,598,585	295,956	80,608	31,820	2,846,212	24	1,423,781	30,911	26,572	1,581	3,983	1,486,828	116	8,454,948	1936
1937	45	165,170	2,138,264	503,235	86,912	30,613	2,924,194	47	459,399	1,480,658	190,425	42,028	31,234	2,209,744	24	1,476,585	376	35,454	138	7,547	1,520,100	116	6,654,038	1937
1938	39	189,880	1,886,104	473,619	140,791	16,339	2,706,733	42	484,518	1,336,000	253,905	75,596	20,146	2,170,165	17	1,848,725	. . .	59,335	345	6,241	1,914,646	98	6,791,544	1938
1939	48	195,907	1,474,269	293,316	65,906	2,364	2,031,762	47	657,198	1,034,623	237,148	37,250	21,023	1,987,242	24	1,118,233	627	95,948	. . .	5,399	1,220,207	119	5,239,211	1939
1940	46	125,462	1,452,037	484,476	155,577	1,539	2,219,091	42	384,266	1,441,266	343,072	126,878	18,359	2,314,475	11	443,653	14,088	32,991	1,675	2,405	494,812	99	5,028,378	1940
1941	47	137,861	3,631,491	321,118	193,751	1,812	4,286,033	44	413,658	1,005,029	333,618	159,023	30,825	1,942,153	19	613,369	129	55,771	3,439	5,609	678,317	105	6,906,503	1941
1942	47	121,083	1,758,741	597,373	189,210	2,033	2,668,779	44	352,475	1,051,359	328,860	180,698	34,916	1,948,308	7	438,111	8,550	16,556	2,629	6,178	472,024	98	5,089,109	1942
1943	34	85,313	1,042,610	672,359	92,245	1,868	1,894,395	34	582,287	1,277,915	167,809	66,311	37,421	2,131,743	14	1,314,575	1,532	42,410	178	11,676	1,370,371	81	5,396,509	1943
1944	38	131,580	1,081,334	655,188	88,380	1,765	1,958,247	45	461,718	1,002,056	286,498	96,255	29,718	1,876,245	13	987,459	3,932	44,039	2,418	5,456	1,043,304	94	4,877,796	1944
1945	41	129,514	1,039,521	265,845	107,425	2,582	1,544,887	43	434,872	1,198,665	331,654	85,506	30,041	2,080,738	8	609,132	1,623	92,551	3,103	9,086	715,495	92	4,341,120	1945
1946	41	59,029	999,443	321,037	94,074	1,612	1,475,195	48	350,728	1,053,605	257,909	96,301	25,356	1,783,899	20	656,141	4,073	38,209	2,686	10,906	712,015	108	3,971,109	1946
1947	40	56,032	680,693	260,666	72,434	4,019	1,073,844	47	470,056	1,034,475	196,731	74,388	34,790	1,810,430	21	1,350,151	8,449	42,814	1,893	14,885	1,418,192	107	4,302,466	1947
1948	39	39,317	683,972	403,959	165,033	5,973	1,298,254	57	318,638	616,822	291,977	69,259	34,774	1,331,470	24	1,277,508	3,250	78,725	7,507	13,898	1,380,888	120	4,010,612	1948
1949	36	39,485	2,102,604	243,080	125,059	1,046	2,511,274	55	391,244	580,438	221,089	59,409	37,213	1,289,393	21	529,859	. . .	44,140	4,411	11,974	590,384	112	4,391,051	1949
1950	36	49,475	535,662	500,422	116,344	560†	1,202,463	55	513,985	558,263	242,301	68,233	40,386	1,423,158	21	590,048	1,609	35,056	6,924	13,375	647,012	112	3,272,643	1950
1951	42	70,317	1,226,582	466,334	264,393	636	2,028,262	59	362,554	333,091	227,632	72,762	71,648	1,067,687	13	339,592	75	25,521	8,003	15,328	388,519	114	3,484,468	1951
1952	40	74,510	593,422	527,960	122,277	2,756	1,320,925	48	377,094	577,407	399,864	67,117	34,935	1,456,417	21	729,560	1,339	38,836	7,692	19,359	796,786	109	3,574,128	1952
1953	35	120,971	355,580	418,260	90,489	1,571	986,871	40	330,933	604,281	333,390	36,730	33,160	1,338,494	19	530,186	1,108	45,398	2,703	20,810	600,205	94	2,925,570	1953
Aver.	39	77,023	929,881	406,275	1,245,908	2,252	1,540,022	50	401,182	757,910	278,905	72,596	37,202	1,545,793	18	759,964	2,546	48,529	4,734	13,508	829,280	106	3,915,096	Aver.

NOTE:– "Average" is for last ten years. Figures for last two years are from "Pacific Fisherman's" own compilation, and include, as far as possible, the pack from Freezership fish. Figures for previous years are from official U. S. data, and cover fish canned in Alaska only.

THE WIGGLE *

BETTER BUY

NEFCO


PILLAR ROCK
FANCY RED
FANCY SOCKEYE
SALMON
ALASKA PINK
PINK BEAUTY SALMON
Gold Standard
QUALITY
SALMON
RED WAVES SALMON

✓ TOP QUALITY

✓ TOP RELIABILITY

✓ TOP PRODUCTION

ALL POPULAR VARIETIES

Canned Salmon and other Seafood · Frozen Steaks and Fillets
Frozen and Mild Cured Fish

Distributed By

NEW ENGLAND FISH CO.

SEATTLE, WASHINGTON

And Its Affiliates

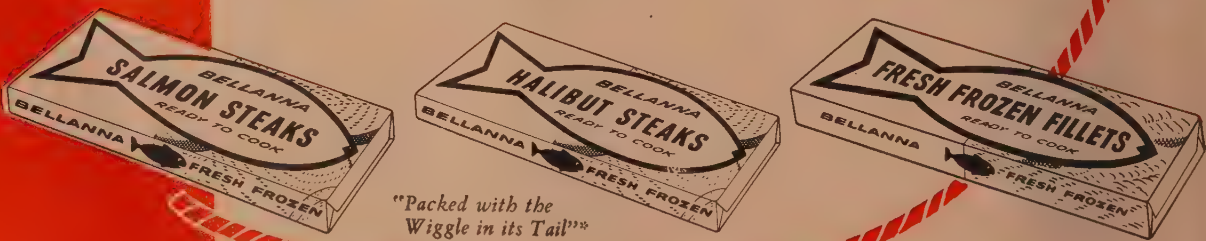
The Canadian Fishing Company, Ltd.
Vancouver, B.C.

New England Fish Co. of Oregon
Astoria, Oregon

Atlin Fisheries, Ltd.
Prince Rupert, B.C.

The Doty Fish Co.
Kalama, Wash.

NEFCO
Fishery
PRODUCTS


BELLANNA
SALMON STEAKS
READY TO COOK
BELLANNA
FRESH FROZEN
BELLANNA
HALIBUT STEAKS
READY TO COOK
BELLANNA
FRESH FROZEN
BELLANNA
FRESH FROZEN FILLETS
READY TO COOK
BELLANNA
FRESH FROZEN

*"Packed with the Wiggle in its Tail"**

Since 1868

SALMON
ALASKA

Adverse Alaska salmon runs in 1953 carried the canned salmon pack of the Territory below 3,000,000 cases for the first time since 1921, and brought the industry and the Federal authorities face-to-face with a situation demanding courageous administrative action and industrial sacrifice to the end that the salmon resource might be restored.

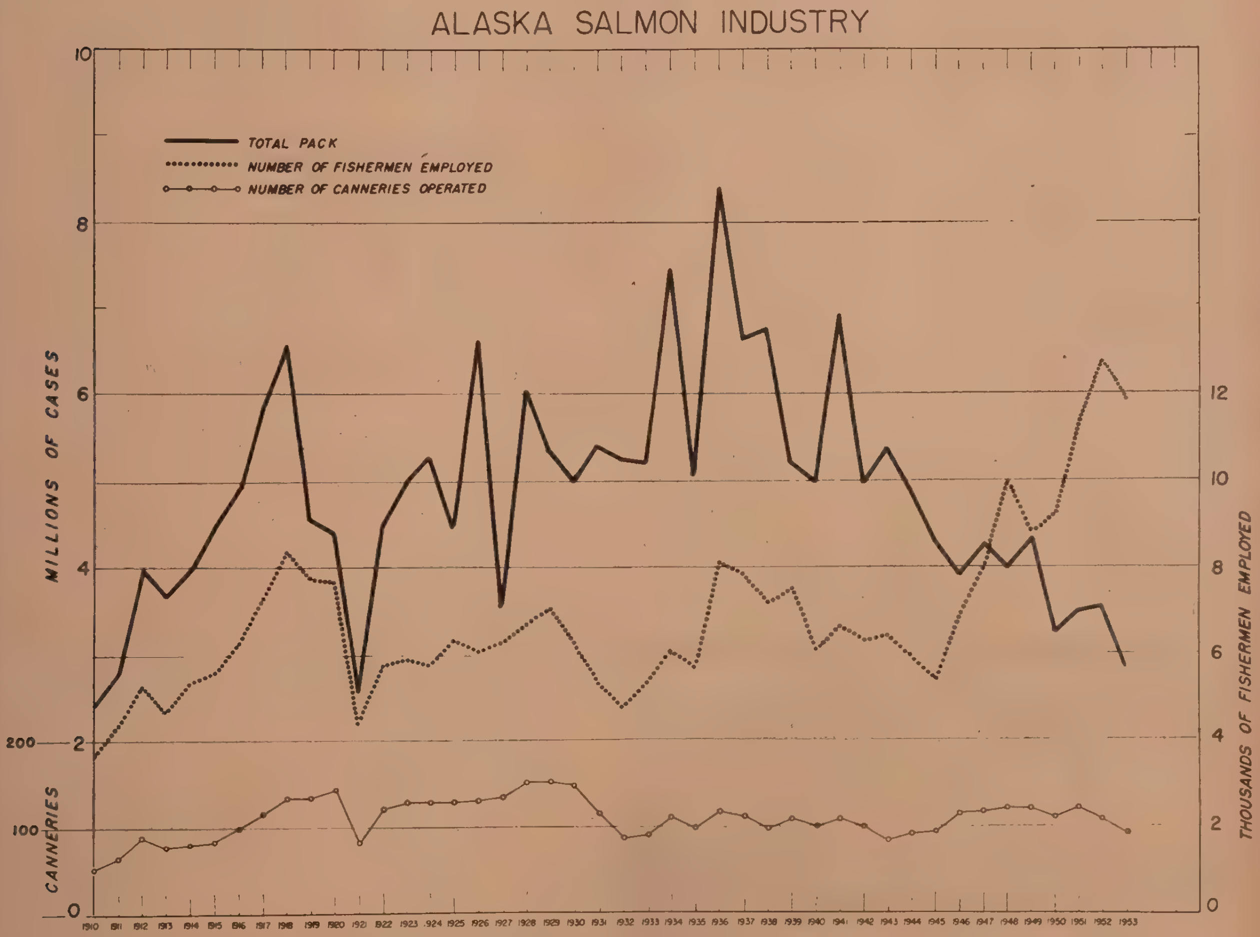
ALASKA SALMON canning fell in 1953 to the lowest level it has attained in more than 30 years—and perhaps since 1911. It is true that the 2,925,000 cases packed in 1953 exceeded the production of 1921, but it must be recognized that it was economic conditions which cut the pack in 1921, while in 1953 the disaster was due entirely to lack of fish — to failure unforeseen.

The low pack was all the more disastrous because rather good results had been anticipated on Bristol Bay, where the "big year" cycle was expected; and in Southeast Alaska on the second return of the tremendous run of 1949, while prices sank despite scarcity.

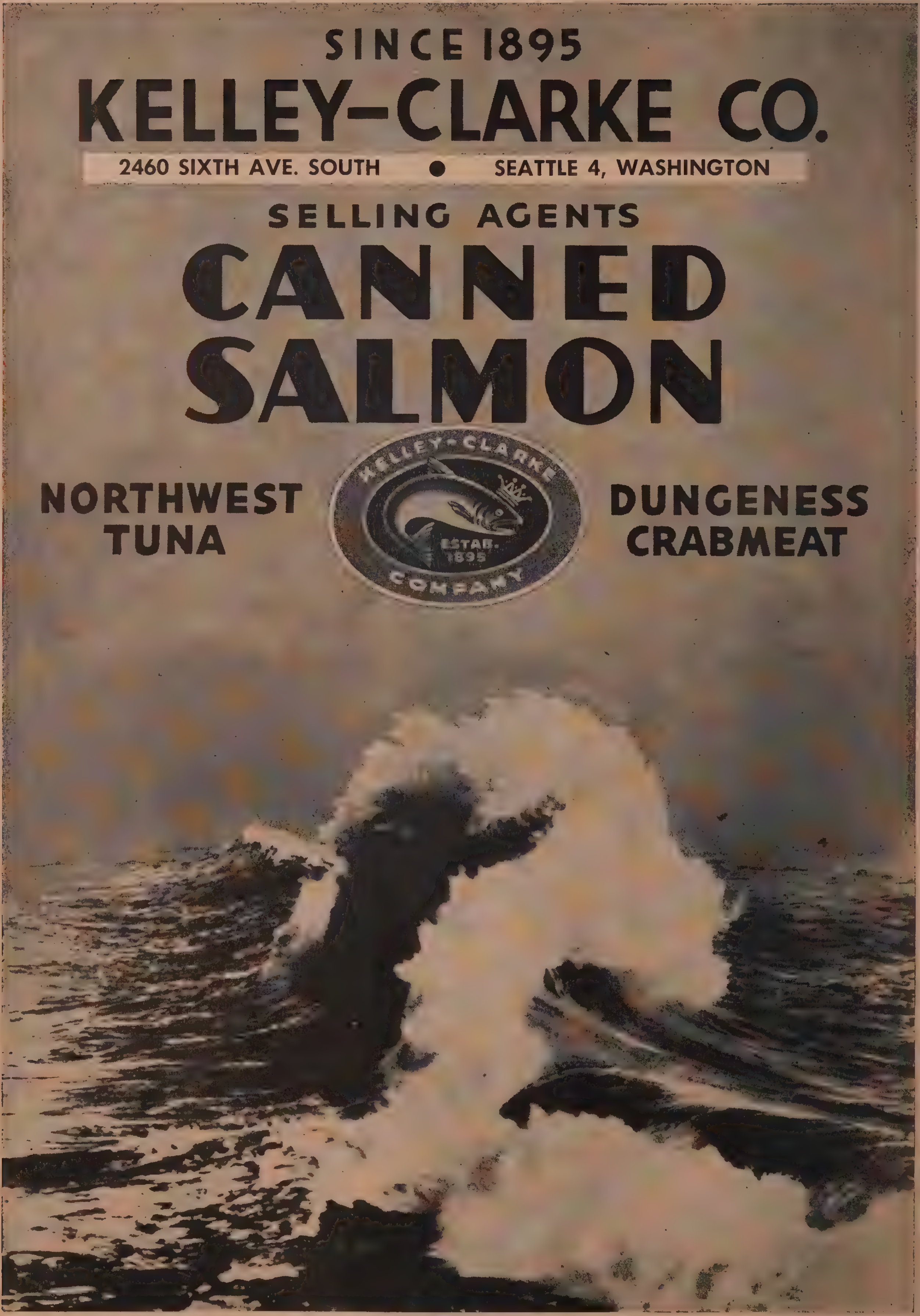
Failure was more complete on Prince William Sound than anywhere else, but nothing much had been expected of the run there—one anticipation which was not upset.

"Big Year," Scant Yield

Bristol Bay Reds, coming back on



CATCH OF FISH FALLS AS NUMBERS OF FISHERMEN RISE—This is the essential kernel of fact in this graph prepared by Seton H. Thompson, chief of the Alaska Branch of the U. S. Fish and Wildlife Service. It shows many things, but most important of all is that the sharp after-the-war increase in fishing served to produce only further decline in catch. The number of canneries keeps low, but the graph cannot show the rise in their productive capacity.



SINCE 1895

KELLEY-CLARKE CO.

2460 SIXTH AVE. SOUTH ● SEATTLE 4, WASHINGTON

SELLING AGENTS

CANNED SALMON

KELLEY-CLARKE COMPANY ESTAB. 1895

NORTHWEST TUNA

DUNGENESS CRABMEAT

1953 - WESTERN ALASKA CANNED SALMON PACK - 1953

	COMPANY	CANNERY LOCATION	RED			PINK	CHUM	COHO	KING or CHINOOK			GRAND TOTAL (full cases)	
			1-lb. Talls & Flats	½-lb. Flats (8 doz.)	Total (full cases)	1-lb. Talls	1-lb. Talls, etc.	1-lb. Talls, etc.	1-lb. Talls & Flats	½-lb. Flats (8 doz.)	Total (full cases)		
	CANNED IN WESTERN ALASKA												
1	Alaska Packers Assn.	Naknek	65,666	...	65,666	...	4,582	31	482	...	482	70,761	1
		Egegik	20,277	...	20,277	...	773	2	29	...	29	21,081	
		Ugashik (1)	24,317	248	24,565	...	(9) 729	...	40	...	40	25,334	
2	Alaska Airborne Fisheries	Squaw Creek (Nushagak) (2)	115	...	115	...	12	62	...	102	102	291	2
3	Bering Trading Co.	Alakanuk (Yukon)	...	...	...	...	...	...	...	8,000	8,000	8,000	3
4	Bingman Canning Co.	Nushagak	225	...	225	...	50	...	...	...	...	275**	4
5	Bristol Bay Packing Co.	Pederson Point	(7) 31,308	...	31,308	...	1,445	...	182	...	182	32,935	5
6	Columia River Packers Packers Assn., Inc.	Naknek	27,374	8,067	35,441	...	2,795	...	217	...	217	38,453	6
7	Egegik Packing Co.	Egegik	17,687	2,856	20,543	...	752	...	28	...	28	21,323	7
8	Intercoastal Packing Co.	Naknek (3)	16,140	...	16,140	...	761	...	77	...	77	16,978	8
9	Levelock Packing Co.	Levelock	3,029	...	3,029	...	137	...	35	...	35	3,201	9
10	Libby, McNeill & Libby	Ekuk, Koggiung & Egegik (4)	67,212	...	67,212	...	7,624	73	5,802	...	5,802	80,711	10
11	Marine Fisheries, Inc.	Bristol Bay (fl)***	1,240	...	1,240	...	57	...	7	...	7	1,304	11
12	Nakat Packing Corporation	Nakeen	25,011	4,932	29,943	...	(10) 4,477	...	457	...	457	34,877	12
13	Northern Commercial Co.	Kwiguk (Yukon)	...	...	...	...	...	...	...	4,130	4,130	4,130	13
14	Pacific American Fisheries, Inc.	Naknek and Port Moller *	(8) 39,683	9,853	49,536	1,100	(11) 9,416	(13) 2,423	639	10	649	63,124	14
15	Peninsula Packers	Naknek (fl)	34,784	...	34,784	8	2,038	13	195	...	195	37,038	15
16	Putvin	Aleknagik ***	75	...	75	...	...	...	...	...	...	75**	16
17	Queen Fisheries, Inc.	Nushagak (fl)	...	14,320	14,320	...	(b) 6,070	(b) 99	...	33	33	20,522	17
18	St. Mary's Mission	Andreafski (Yukon)***	...	...	...	...	...	...	...	209	209	209	18
19	Dominick Svornich	Various (5)	...	2,900	2,900	...	(b) 245	...	...	...	...	3,145	19
20	Transpacific Fishing & Packing Co.	Pederson Point & Egegik (6)	5,503	...	5,503	...	266	...	11	...	11	5,780	20
21	Wards Cove Packing Co.	"Red Salmon" (Naknek)	33,268	...	33,268	...	888	...	74	...	74	34,230	21
22	L. G. Wingard Packing Co.	Ugashik	21,506	495	22,001	...	(12) 705	...	40	...	40	22,746	22
	TOTAL, WESTERN ALASKA CANNERIES		434,420	43,671	478,091	1,108	43,822	2,703	8,315	12,484	20,799	546,523	
	FREEZERSHIP PACK — MADE FROM BRISTOL BAY SALMON, FROZEN AND CANNED ELSEWHERE†												
1	Alaska Reefer Fisheries	"Alaska Reefer" (A)	6,488	1,035	7,523	...	136	...	...	...	...	7,659	1
2	Arctic Maid Fisheries	"Arctic Maid" (A)	4,907	1,669	6,576	...	791	...	8	...	8	7,375	2
3	Malaspina Fisheries Co.	"Michelle Eve" (B)	962	...	962	...	...	...	...	...	...	962	3
4	North Star Fisheries	"North Star" (C)	12,345	1,294	13,639	...	...	...	...	...	...	13,639	4
5	Pacific Queen Fisheries	"Pacific Queen" (C)	6,428	940	7,368	...	...	...	...	...	...	7,368	5
6	Pacific Reefer Fisheries	"Pacific Reefer" (D)	8,311	1,112	9,423	...	372	...	...	...	...	9,795	6
7	Reefer King Co.	"Reefer King" (E)	3,626	2,622	6,248	...	(a) 263	...	...	3	3	6,514	7
8	John S. York	"K - J" (F)	...	356	356	...	(b) 14	...	...	...	...	370	8
	TOTAL FREEZERSHIPS		43,067	9,028	52,095	...	1,576	...	8	3	11	53,682	
	GRAND TOTAL		477,487	52,699	530,186	1,108	45,398	2,703	8,323	12,487	20,810	600,205	

NOTES: — (1) Canned through joint operation in L. G. Wingard plant. (2) New company, using machinery formerly operated by Bristol Bay Mission School. (3) Canned in plant of Bristol Bay Packing Co. (4) Egegik pack made through joint operation in Alaska Packers Association plant; Libbyville operation consolidated in Koggiung plant. (5) A fishing operation; catch custom-canned in various plants. (6) A fishing operation; catch custom-canned in plants of Bristol Bay and Egegik Packing companies. (7) Includes 9,368 cases 1-lb. Flats. (8) Includes 9,753 cases 1-lb. Flats. (9) Includes 35 full cases Halves. (10) Includes 3,358 full cases Halves. (11) Includes 134 full cases Halves. (12) Includes 70 full cases Halves. (13) Includes 1,878 full cases Halves.

***New Operation. **Estimated. *Packs of Pacific American Fisheries, Inc., are tabulated in detail on another page of this issue. †Bristol Bay salmon from Freezerships was canned in plants of various companies in other districts, as follows: (A) Washington Fish & Oyster Co., Seattle. (B) Ouzinkie Packing Corp., Ouzinkie (Kodiak area). (C) Friday Harbor Canning Co., Friday Harbor, Wash. (D) Whiz Fish Products Co., LaConner, Wash. (E) Farwest Fishermen, Inc., Anacortes, Wash. (F) Fish sold and canned on Puget Sound. (a) Includes 10 full cases Halves. (b) All Halves, full cases.

DATA ON BRISTOL BAY OPERATIONS

YEAR	Number of Canneries Operated	Canning Lines in Operation	Number of Other Operations	Total Boats Fishing Salmon	Total Set Nets Fishing	Total Fathoms of Gear Operated	Number of Salmon Caught	Canned Salmon Pack (full cases)	Number of Salmon Used for Other Purposes than Canning (or Shipped Uncanned)	YEAR
1930	25	114	4	868	113	168,975	4,405,378	405,892	62,334	1930
1935	8	15½	3	181	169	35,600	3,116,493	245,047	75,140	1935
1936	23	91	8	1,102	410	170,900	21,051,695	1,450,856	164,996	1936
1937	22	83	7	1,086	313	166,750	21,282,098	1,459,450	107,068	1937
1938	17	67	...	1,006	189	160,350	25,295,927	1,834,436	(None)	1938
1939	22	96	2	1,219	268	196,250	14,300,806	1,154,921	7,644	1939
1940	8	36	11	503	233	87,100	5,318,481	446,513	136,507	1940
1941	16	50	3	791	225	129,900	6,958,140	642,977	30,472	1941
1942	6	12	...	224	65	36,850	6,732,502	469,624	(None)	1942
1943	11	33	...	633	158	102,850	17,749,837	1,320,286	(None)	1943
1944	12	35	1	655	187	106,780	11,957,230	982,802	8,840	1944
1945	8	17	7	316	207	58,250	7,978,607	644,072	68,546	1945
1946	16	42	11	777	215	126,150	8,406,905	682,180	175,951	1946
1947	17	49	7	928	340	142,064	18,937,386	1,376,722	130,655	1947
1948	20	59	2	1,053	403	178,730	15,156,876	1,316,168	66,492	1948
1949	19	32	8	731	467	132,115	6,805,568	563,020	202,415	1949
1950	13	26	17	520	516	102,095	7,402,764	586,555	364,122	1950
1951	16	28½	20	717*	504	119,120	4,615,607	342,075	672,740	1951
1952	21	46½	17	1,118**	463	187,575	11,464,559	758,809	1,584,839	1952
1953	15	33	17	1,153†	345	290,200	6,541,852	488,083	754,298	1953

NOTE: — Data in this table compiled by U.S. Fish & Wildlife Service. Figures for boats and gear include those used in connection with salteries and freezers. The data are for the Bristol Bay area, including the Nushagak, Kvichak, Naknek, Egegik and Ugashik sections, but NOT the Yukon-Kuskokwim, Port Heiden, Herendeen Bay nor Port Moller districts. Figures for canned pack may be somewhat different from those in other tables.

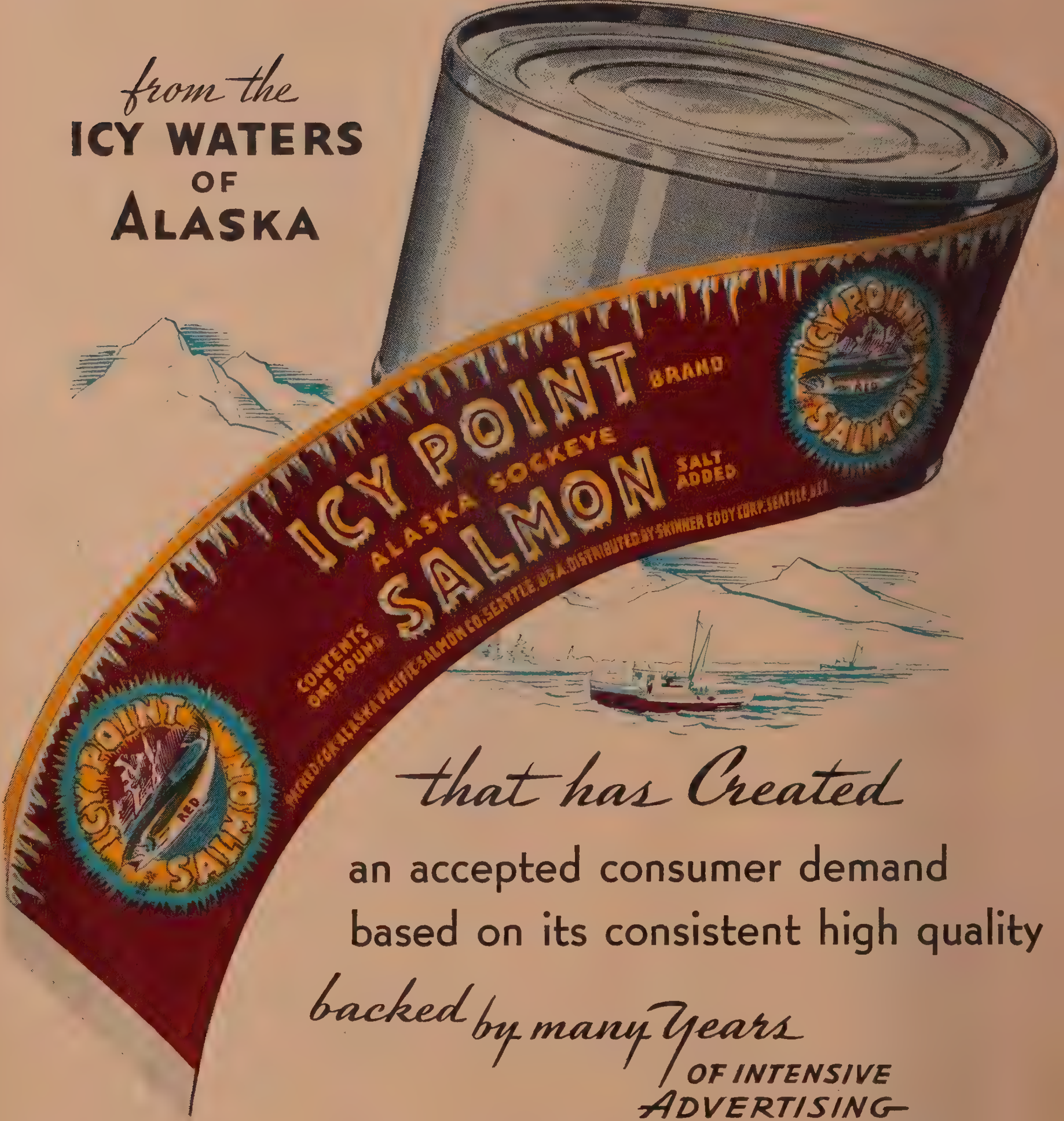
* 631 sailboats and 86 power boats in 1951.

** 895 power boats and 223 sailboats in 1952.

† 1,095 power boats and 58 sailboats.

a superior quality —
SALMON

from the
ICY WATERS
OF
ALASKA


ICY POINT
BRAND
ALASKA SOCKEYE
SALMON
SALT ADDED
CONTENTS ONE POUND
PACKED FOR ALASKA PACIFIC SALMON CO. SEATTLE U.S.A. DISTRIBUTED BY SKINNER EDDY CORP. SEATTLE, U.S.A.
ICY POINT SALMON
RED

that has Created

an accepted consumer demand
based on its consistent high quality

backed by many Years
OF INTENSIVE
ADVERTISING—

Skinner & Eddy Corporation, Inc.

SKINNER BUILDING, SEATTLE 1, WASHINGTON

Pack of Alaska Canned Salmon by Species and Values

Salmon fishing in Alaska commenced in 1878, but no segregation of the packs by species is available prior to 1896, while the valuations were not recorded prior to 1905. Earlier total packs, starting with 8,159 cases in 1878, ranged from 6,539 cases in 1880 to a peak of 801,400 in 1891, the output in 1895 being 626,530 cases. The average from the beginning through 1895 was 291,973 cases.

The "Average" figures at bottom of table are for the last ten years. Values are based on opening prices, or on prices at which the bulk of the packs were sold.

YEAR	RED, SOCKEYE		PINK		CHUM		COHO		KING		TOTAL		YEAR
	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	
1896	806,010	....	111,986	....	452	....	37,017	....	11,242	....	966,707	....	1896
1897	688,581	....	157,711	....	1,396	....	43,557	....	17,833	....	909,070	....	1897
1898	782,941	....	109,399	....	5,184	....	54,711	....	12,862	....	965,997	....	1898
1899	864,254	....	149,159	....	1,931	....	39,402	....	23,400	....	1,078,146	....	1899
1900	1,197,406	....	232,022	....	30,012	....	50,984	....	37,715	....	1,548,139	....	1900
1901	1,319,335	....	541,427	....	47,464	....	65,509	....	43,069	....	2,016,804	....	1901
1902	1,685,546	....	549,602	....	159,849	....	82,723	....	59,104	....	2,536,824	....	1902
1903	1,687,244	....	355,799	....	35,052	....	120,506	....	47,609	....	2,246,210	....	1903
1904	1,505,548	....	299,333	....	21,178	....	85,741	....	41,956	....	1,953,756	....	1904
1905	1,574,428	$5,335,547	168,579	$498,194	41,972	$113,056	67,394	$215,875	42,125	$141,999	1,894,516	$6,304,671	1905
1906	1,475,961	5,620,875	348,875	1,046,951	254,812	730,235	109,141	382,109	30,834	116,222	2,219,044	7,896,392	1906
1907	1,295,113	5,915,227	561,973	1,799,290	184,173	547,757	85,190	337,384	43,424	181,718	2,169,873	8,781,366	1907
1908	1,651,770	7,524,251	644,133	1,733,379	218,513	554,197	68,827	274,089	23,730	99,867	2,606,973	10,185,783	1908
1909	1,705,302	7,610,550	464,873	1,114,839	120,712	274,110	56,556	231,029	48,034	207,624	2,305,477	9,438,151	1909
1910	1,450,267	7,774,390	554,322	1,764,055	254,218	773,409	114,026	559,666	40,221	214,802	2,413,054	11,086,322	1910
1911	1,320,705	8,552,512	1,021,356	4,493,966	303,823	1,215,692	120,704	752,283	45,378	363,024	2,820,966	16,198,833	1911
1912	1,904,258	10,776,987	1,303,365	3,410,928	638,528	1,600,444	170,384	791,023	52,594	310,847	4,060,129	16,890,229	1912
1913	1,964,379	9,136,616	1,402,916	3,687,446	267,654	623,424	77,377	271,078	34,167	140,914	3,746,914	13,859,478	1913
1914	2,201,574	12,482,110	997,823	3,600,075	662,478	2,260,614	157,792	735,219	48,165	281,924	4,067,832	19,719,942	1914
1915	1,922,296	11,907,202	1,870,373	5,619,436	484,408	1,356,469	126,570	588,903	85,694	458,000	4,489,341	19,930,010	1915
1916	2,119,442	13,147,994	1,753,546	6,446,168	715,238	2,434,627	265,184	1,430,143	66,179	364,496	4,919,589	23,823,428	1916
1917	2,484,881	29,058,778	2,298,466	15,120,419	877,713	5,375,713	193,708	1,634,600	67,552	660,868	5,922,320	51,850,017	1917
1918	2,618,559	25,313,837	2,418,212	16,142,604	1,366,859	8,756,598	216,572	2,068,784	57,367	596,000	6,677,569	52,877,823	1918
1919	1,265,543	17,143,017	1,657,434	14,982,542	1,348,462	9,450,772	230,229	2,809,310	90,533	1,131,662	4,592,201	45,552,714	1919
1920	1,475,780	19,851,816	1,613,434	9,751,845	1,022,708	4,712,575	192,311	1,579,963	91,276	1,154,013	4,395,509	37,050,212	1920
1921	1,758,794	16,539,177	440,471	1,938,263	247,606	990,424	109,783	649,480	48,319	352,699	2,604,699	20,470,043	1921
1922	2,075,397	19,719,158	1,657,556	7,709,011	562,496	2,369,396	174,312	949,312	31,604	258,799	4,501,428	31,006,027	1922
1923	1,878,330	17,727,572	2,455,136	12,337,580	527,145	2,542,759	163,752	957,439	38,977	344,078	5,063,340	33,909,428	1923
1924	1,449,724	14,840,946	2,613,068	13,191,793	1,027,183	4,931,172	182,207	1,312,969	33,741	304,809	5,305,923	34,581,689	1924
1925	1,065,290	15,243,243	2,105,240	11,473,271	1,065,395	4,701,847	164,199	1,702,243	50,774	682,235	4,450,898	33,802,839	1925
1926	2,157,087	21,328,739	3,338,349	17,987,527	902,443	4,518,929	202,527	1,700,563	52,476	544,247	6,652,882	46,080,005	1926
1927	1,320,563	16,880,670	1,414,756	8,638,551	507,641	2,761,638	252,629	2,307,569	70,438	853,100	3,566,072	31,441,534	1927
1928	1,944,061	18,902,050	2,785,464	18,512,649	991,504	564,567	297,886	2,140,685	51,195	505,017	6,070,110	45,624,968	1928
1929	1,693,050	19,388,299	2,570,506	15,551,647	860,876	4,659,754	172,070	1,302,887	73,740	769,869	5,370,242	41,672,456	1929
1930	848,787	11,172,954	3,150,652	12,773,894	596,000	2,162,306	329,988	3,011,505	63,560	764,254	4,988,987	29,884,813	1930
1931	1,695,782	16,161,532	2,978,512	10,226,769	536,909	1,726,203	170,208	1,119,332	51,124	462,800	5,432,535	29,696,636	1931
1932	2,104,727	10,803,982	2,116,573	6,368,695	821,128	2,301,408	149,351	606,798	68,709	368,522	5,260,488	20,449,405	1932
1933	2,182,371	14,649,771	2,183,443	10,498,358	658,245	3,028,584	161,633	884,276	41,006	345,310	5,226,698	29,406,294	1933
1934	2,626,002	17,687,617	3,822,602	15,349,445	735,055	2,661,538	235,560	1,197,000	51,367	155,230	7,470,586	37,040,830	1934
1935	823,175	7,216,754	3,254,528	13,767,517	852,730	3,414,160	188,918	1,263,479	36,475	348,024	5,155,826	26,009,934	1935
1936	2,482,555	19,648,482	4,589,270	18,430,508	1,106,983	4,094,532	218,232	1,453,566	57,908	452,125	8,454,948	44,079,213	1936
1937	2,101,154	21,590,206	3,619,298	18,151,343	729,114	3,507,933	135,078	1,096,905	69,394	682,031	6,654,038	45,028,418	1937
1938	2,523,123	19,663,910	3,222,104	12,350,571	786,859	2,848,266	216,732	1,342,715	42,726	341,788	6,791,544	36,547,250	1938
1939	1,971,338	18,560,539	2,509,519	12,656,697	626,412	2,905,286	103,156	708,013	28,036	280,036	5,239,211	35,110,571	1939
1940	953,381	9,402,841	2,908,025	15,770,772	860,539	4,312,766	284,130	2,122,330	22,303	219,742	5,028,378	31,828,451	1940
1941	1,164,888	15,952,391	4,636,649	32,593,271	710,507	4,844,060	356,213	3,595,982	38,246	480,998	6,906,503	57,466,702	1941
1942	912,006	13,804,764	2,818,650	22,565,374	942,789	7,178,696	372,537	4,442,108	43,127	686,567	5,089,109	48,677,509	1942
1943	1,982,175	30,381,755	2,322,057	18,701,467	882,578	6,755,829	158,734	1,937,981	50,965	802,162	5,396,509	58,579,194	1943
1944	1,580,757	24,254,327	2,087,322	16,924,966	985,725	7,565,526	187,053	2,278,938	36,939	584,787	4,877,796	51,608,544	1944
1945	1,173,356	18,260,328	2,239,282	18,201,352	688,485	5,312,578	195,860	2,078,066	41,709	676,640	4,338,692	44,528,964	1945
1946	1,065,898	22,880,873	2,057,121	24,685,452	617,155	7,120,923	193,061	3,231,992	37,874	748,321	3,971,109	58,667,561	1946
1947	1,876,239	45,390,823	1,723,617	32,269,419	500,211	8,983,297	148,715	3,522,434	53,684	1,131,912	4,302,466	91,297,885	1947
1948	1,635,463	44,994,233	1,304,044	31,617,066	774,661	16,345,475	241,799	6,278,595	54,645	1,459,245	4,010,612	100,694,614	1948
1949	967,626	25,504,967	2,682,330	42,921,708	499,226	7,572,386	192,352	4,004,944	50,007	1,258,463	4,391,541	81,262,468	1949
1950	1,153,508	33,845,862	1,095,534	25,663,330	777,779	15,212,302	191,501	5,131,834	54,321	1,550,183	3,272,643	81,403,511	1950
1950	1,166,052	34,211,966	1,095,534	25,663,330	780,684	15,269,095	191,501	5,131,834	54,321	1,550,183	3,288,092	81,826,408	1950
1951	816,831	26,017,227	1,559,748	32,505,086	721,152	10,950,656	345,159	5,131,859	91,425	2,596,635	3,534,315	77,201,513	1951
1952	1,181,162	33,783,498	1,172,168	21,705,200	966,660	15,140,209	197,004	4,201,837	56,970	1,521,732	3,574,191	76,357,016	1952
1953	982,090	27,996,373	960,969	17,439,908	797,048	11,214,236	129,922	2,894,714	55,541	1,442,103	2,925,570	60,987,334	1953
AVER.	1,244,548	$30,329,461	1,688,213	$26,393,349	733,101	10,547,438	202,243	$3,875,521	53,311	$1,297,002	3,921,438	$72,443,231	AVER.

NOTE:– Figures for the last year shown are Pacific Fisherman's own compilation from original sources, and include fish canned elsewhere from salmon caught and frozen in Alaska. Figures for previous years are from official Fish & Wildlife Service data, to which have been added fish canned elsewhere from fish caught and frozen in Alaska.

RED SALMON PACKS ON BRISTOL BAY

YEAR	FIRST WEEK		SECOND WEEK		THIRD WEEK		FOURTH WEEK		TO CLOSE	TOTAL	YEAR
1940	(July 6)	221,687	(July 13)	139,853	(July 20)	33,848	(July 28)	4,606	...	399,994	1940
1941	(July 5)	204,929	(July 12)	206,049	(July 19)	127,573	(July 28)	31,316	...	569,867	1941
1942	(July 4)	149,175	(July 11)	142,145	(July 18)	93,174	(July 25)	44,323	7,357	436,174	1942
1943	(July 3)	284,635	(July 10)	449,076	(July 17)	272,074	(July 24)	242,122	27,174	1,275,081	1943
1944	(July 8)	431,421	(July 15)	347,149	(July 22)	116,514	(July 29)	18,045	...	944,129	1944
1945	(July 7)	236,413	(July 14)	233,332	(July 21)	84,681	(July 28)	15,405	...	569,831	1945
1946	(July 6)	241,948	(July 13)	241,405	(July 20)	88,520	(July 27)	30,831	...	602,704	1946
1947	(July 5)	641,401	(July 12)	376,575	(July 19)	242,854	(July 26)	70,975	3,226	1,335,031	1947
1948	(July 3)	482,252	(July 10)	464,488	(July 17)	169,806	(July 24)	112,111	7,680	1,236,226	1948
1949	(July 2)	260,145	(July 9)	142,637	(July 16)	86,865	(July 23)	30,675	3,581	523,903	1949
1950	(July 1)	93,006	(July 8)	370,340	(July 15)	89,070	(July 22)	10,832	411	563,659	1950
1951	(June 30)	59,185	(July 7)	127,553	(July 14)	73,692	(July 21)	59,143	...	319,573	1951
1952	(June 28)	92,073	(July 5)	228,069	(July 12)	256,014	(July 19)	119,729	21,618	712,503	1952
1953	(June 27)	63,478	(July 4)	191,378	(July 11)	127,590	(July 18)	51,229	9,382	443,057	1953

Compiled from U. S. Fish and Wildlife Service statistics. Figures in first column of table are for the total pack (in full cases of 48 lbs. net) to dates shown; those following show weekly packs.

Henry W. Peabody & Co.
of London, Limited.

16 EASTCHEAP, LONDON, E. C. 3, ENGLAND
Established 1883

- ★ CANNED FRUITS
- ★ DRIED FRUITS
- ★ CANNED FISH
- ★ MILD CURED FISH
- ★ HONEY
- ★ FRUIT JUICES
- ★ PULPS
- ★ CEREALS

. . . and Other Food Products

LONDON • LIVERPOOL • CAPETOWN • JOHANNESBURG • NEW YORK and the ORIENT

CAPE TOWN, SOUTH AFRICA OFFICES . . . . . . ARGUS CHAMBERS, 30 CHURCH STREET

U. S. A. OFFICES . . . 60 HUDSON STREET, NEW YORK 13, N. Y.
COLMAN BLDG., SEATTLE 4, WASH.

WESTERN ALASKA CANNED SALMON PACKS

BRISTOL BAY AND YUKON (Cases)						YEAR	ALASKA PENINSULA, NORTH SIDE (Cases)						GRAND TOTAL
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL	
1,588,008	····	24,559	1,456	9,197	1,623,220	1933	26,665	····	1,490	····	284	28,439	1,651,659
1,726,769	1,959	32,222	1,219	8,580	1,770,759	1934	87,379	····	974	····	217	88,570	1,859,329
231,014	····	6,995	223	660	238,892	1935	34,920	4	2,862	····	175	37,961	276,853
1,388,776	30,773	25,045	1,571	4,092	1,450,257	1936	38,930	293	1,511	····	214	40,948	1,491,205
1,421,369	····	29,286	138	6,897	1,457,690	1937	55,315	1	6,170	····	234	61,720	1,519,410
1,772,885	····	54,551	345	5,446	1,833,227	1938	73,942	····	5,063	····	1,053	80,058	1,913,285
1,059,181	····	88,272	····	5,038	1,152,491	1939	56,310	2	6,478	····	465	63,255	1,215,746
402,899	16,081	30,624	1,445	3,504	454,553	1940	56,158	····	4,914	····	79	61,151	515,704
577,024	9	50,901	3,436	5,785	637,155	1941	36,366	95	4,953	····	179	41,593	678,748
438,053	8,564	16,749	2,638	7,001	473,005	1942	····	····	····	····	····	····	473,005
1,275,212	····	37,757	180	11,826	1,324,975	1943	39,330	54	3,680	····	56	43,120	1,368,095
954,694	3,911	31,838	2,408	5,420	998,271	1944	31,849	130	12,855	····	21	44,855	1,043,126
576,318	····	66,888	3,105	9,478	665,789	1945	32,342	127	25,007	····	22	57,498	723,287
628,240	4,073	36,436	2,663	10,768	682,180	1946	27,821	····	1,798	····	167	29,786	711,966
1,335,031	····	35,802	1,866	13,737	1,386,436	1947	25,675	····	6,047	8	71	31,801	1,418,237
1,212,233	3,148	64,167	4,140	13,576	1,297,264	1948	65,961	101	17,474	1,220	310	85,066	1,382,330
525,309	····	33,345	2,214	13,795	574,663	1949	10,612	····	2,954	2,349	179	16,094	590,757
577,158	1,607	16,588	2,840	13,217	611,410	1950	10,335	2	18,294	4,098	158	32,887	654,162*
319,709	····	15,254	3,357	14,753	353,073	1951	29,322	10,337	11,595	2,561	370	54,185	407,258
309,936	......	15,744	4,366	15,086‡	345,132	1951	29,656	75	9,777	3,637	242	43,387	388,519
715,083	1,339	31,457	1,661	19,236	768,776	1952	14,477	....	7,379	6,031	123	28,010	796,786
443,137	1	36,921	78	20,319§	500,456	1953	17,391	1,175	9,157	3,301	396	31,420	531,876
664,215	1,016	35,260	2,629	14,396	718,517	Aver.	26,359	1,181	10,948	2,320	204	41,013	760,518

* Includes 9,865 cases of Kings packed in Kotzebue-Yukon-Kuskokwim district.

§ Includes 12,373 cases of Kings packed in Yukon-Koskokwim district.

‡ Includes 10,425 cases of Kings packed in Kotzebue-Yukon-Kuskokwim district.

NOTE: — Figures are based on U.S. Fish & Wildlife Service final data, which DO NOT include fish caught in these areas, and canned elsewhere, accordingly are somewhat different from those in other tables compiled independently by Pacific Fisherman. Figures for the latest year shown are preliminary. "Average" figures are for the last ten years.

the fifth year from the good 1,277,000-case pack of 1948, were expected to appear in a good run. The actual pack, 530,186 cases of Reds in all Western Alaska, was a bitter disappointment, and was responsible for losses to the packers running well into the millions.

The pack was only about two-thirds of the 10-year average for the area; and well under half the cycle year.

Central Alaska Leads With Best, and Worst

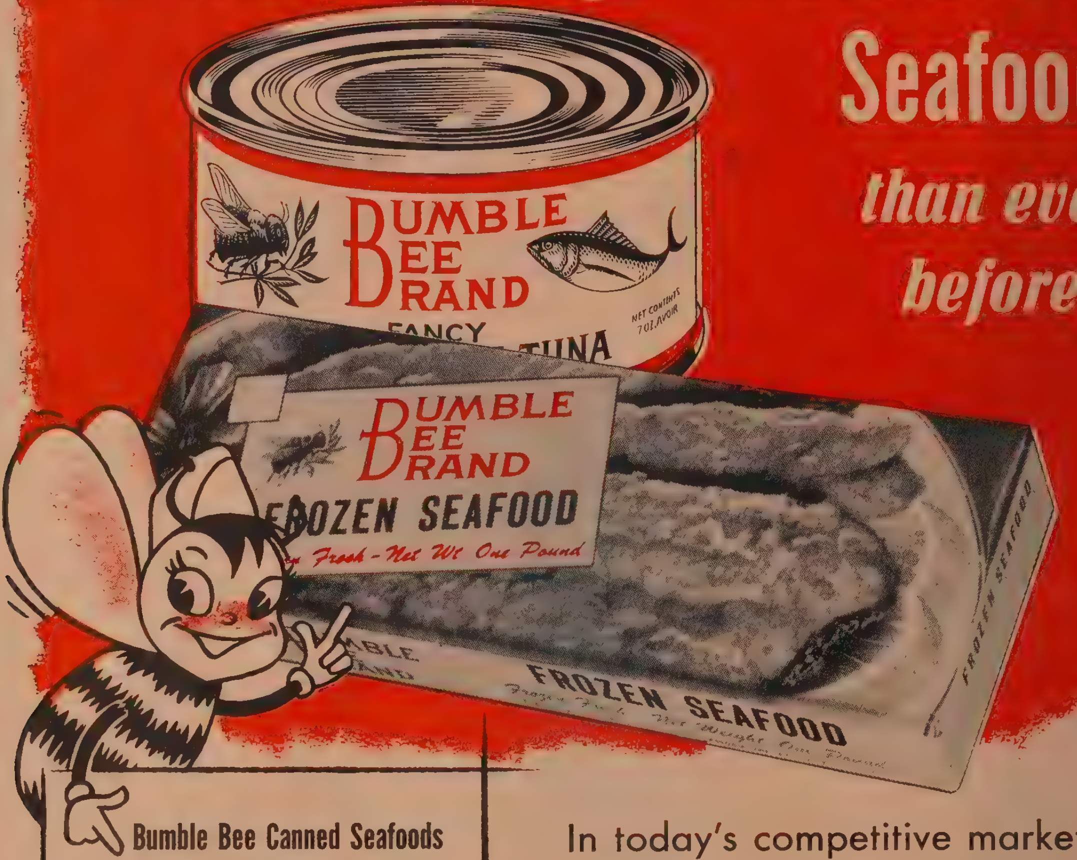
Central Alaska, as a region, in 1953 saw the Territory's best fishing, and the worst. Results in the Kodiak Island and Chignik areas—

UNITED STATES CANNED SALMON PACK

YEAR	Red or Sockeye	Pink	Chum or Keta	Med. Red Côho or Silverside	King or Chinook	Steelhead	GRAND TOTAL	YEAR
1916	2,217,259	1,755,433	1,260,131	529,096	579,615	19,013	6,360,547	1916
1917	2,908,995	3,432,573	1,173,040	431,160	597,704	23,937	8,567,409	1917
1918	2,711,251	2,425,500	1,677,416	647,020	589,786	25,170	8,076,143	1918
1919	1,338,401	2,079,775	1,995,446	593,192	664,844	19,899	6,630,347	1919
1920	1,541,286	1,618,103	1,090,103	251,533	586,749	13,659	5,101,705	1920
1921	1,870,396	845,184	288,539	238,595	369,756	10,142	3,622,612	1921
1922	2,181,197	1,659,781	650,079	491,643	313,992	24,983	5,231,675	1922
1923	1,974,495	2,930,985	702,536	415,084	362,660	25,997	6,411,757	1923
1924	1,533,237	2,619,013	1,266,654	418,336	378,218	29,862	6,245,320	1924
1925	1,187,784	2,659,144	1,214,304	477,159	481,071	14,859	6,034,321	1925
1926	2,218,638	3,334,787	1,067,053	429,942	408,136	33,128	7,491,684	1926
1927	1,430,116	1,993,679	656,911	459,209	481,914	31,643	5,053,472	1927
1928	2,010,956	2,791,061	1,302,422	445,496	335,907	16,605	6,902,447	1928
1929	1,819,469	3,298,127	1,115,924	367,847	358,085	24,104	6,983,556	1929
1930	1,232,340	3,154,364	683,451	566,250	390,756	16,932	6,044,093	1930
1931	1,792,111	3,684,092	615,441	285,930	390,563	12,355	6,780,492	1931
1932	2,200,104	2,118,250	1,006,776	257,735	318,770	13,218	5,914,853	1932
1933	2,321,784	2,726,783	727,917	243,055	323,176	18,027	6,360,742	1933
1934	2,876,981	3,825,989	849,721	371,521	322,968	14,901	8,361,990	1934
1935	882,408	3,624,148	893,612	364,625	257,773	14,888	6,037,454	1935
1936	2,553,160	4,590,422	1,249,188	287,224	283,941	19,282	8,983,217	1936
1937	2,168,528	3,947,271	786,397	236,708	369,725	17,568	7,526,197	1937
1938	2,677,723	3,222,559	845,433	294,257	218,989	15,248	7,274,209	1938
1939	2,020,200	2,791,790	668,274	227,143	238,827	25,293	5,971,527	1939
1940	1,040,241	2,910,972	919,368	375,668	269,217	33,436	5,548,902	1940
1941	1,308,740	4,790,573	851,902	440,653	372,624	33,162	7,779,654	1941
1942	1,194,985	2,819,501	1,089,555	406,032	320,531	21,911	5,852,515	1942
1943	2,004,204	2,384,186	895,265	191,135	185,340	16,261	5,676,391	1943
1944	1,618,729	2,087,621	987,382	202,364	203,761	19,222	5,119,079	1944
1945	1,227,162	2,549,848	693,803	239,086	181,367	19,314	4,910,580	1945
1946	1,350,629	2,060,243	694,728	217,004	222,744	17,767	4,563,115	1946
1947	1,911,284	2,363,069	666,497	293,058	356,665	22,091	5,612,664	1947
1948	1,734,091	1,308,689	1,054,637	370,610	338,037	20,362	4,826,426	1948
1949	1,075,427	3,236,317	718,878	277,495	207,868	8,931	5,524,916	1949
1950	1,290,249	1,097,811	1,317,761	352,126	205,981	10,534	4,274,462	1950
1951	936,120	2,001,352	981,524	466,880	244,832	14,862	4,645,570	1951
1952	1,413,670	1,175,054	1,290,667	397,534	159,086	19,011	4,455,022	1952
1953	1,153,238	1,409,051	944,154	220,543	153,990	19,363	3,900,339	1953
10 Yr. Average	1,371,060	1,928,905	935,003	303,670	227,433	17,146	4,783,217	10 Yr. Average

NOTE:– Figures represent full cases of 48 lbs. net. "Average" is for the last ten years. Figures for the last year shown are from Pacific Fisherman's compilation; those for previous years have been revised from official data.

Grocers are selling more Bumble Bee Seafoods *than ever before*


BUMBLE BEE BRAND
FANCY
TUNA
NET CONTENTS 7 OZ. AVOIR
BUMBLE BEE BRAND
FROZEN SEAFOOD
Fresh - Net Wt One Pound
FROZEN SEAFOOD

Bumble Bee Canned Seafoods

- Alaska Sockeye Red Salmon
- Blueback Salmon
- Puget Sound Sockeye Salmon
- Columbia River Chinook Salmon
- Cohoe Salmon Steak
- Pink Salmon
- Smoked Salmon
- Solid Pack Albacore Tuna
- Chunk and Flake Albacore Tuna
- Solid Pack Light Meat Tuna
- Chunk Style Light Meat Tuna
- Kippered Sturgeon
- Shad Roe

Bumble Bee Frozen Seafoods

- Fillet of Sole
- Fillet of Perch
- Fillet of Rockfish
- Salmon Steak
- Halibut Steak

BUMBLE BEE BRAND
RED SALMON
SALMON
PINK SALMON
WHITE MEAT TUNA
SHAD ROE
CHUNK STYLE TUNA

In today's competitive market there are good reasons for this!

Here are two of them:

1 People want good food. Bumble Bee gives them consistent top quality at fair prices. You know with such products you build your business with satisfied repeat customers.

2 Grocers know the value of having a variety of items under one well-known and respected label...each item helps sell the others, builds over-all business. Bumble Bee is the largest line of seafoods under one packer's label.

It's profitable to stock ***Bumble Bee Seafoods***

Put Bumble Bee on your order list today

COLUMBIA RIVER PACKERS ASSOCIATION, INC.
ASTORIA, OREGON

indeed all along the South Peninsula—were rather good. Cook Inlet was fair, when allowance is made for the quantity of fish hauled from there for canning in other districts. On the other hand, Prince William Sound was as complete a failure as could occur in actuality.

Altogether, Central Alaska accounted for almost half of Alaska's 1953 canned salmon production, despite disaster on Prince William Sound. The region as a whole canned 1,338,000 cases—about 120,000 under the pack of the year before, and more than 200,000 cases under the regional average—but decidedly good in comparison with results elsewhere.

Central Alaska Reds in 1953 continued the steady, but gradual, decline which has been manifest for years. The Pink pack was better than the year before — on a more favorable cycle — but fell short of the average for the region. Chums were quite strong — above the average — but still short of the flush pack of 1952.

CENTRAL ALASKA CANNED SALMON PACKS

ALASKA PENINSULA, SOUTH SIDE (Cases)						YEAR	CHIGNIK (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
152,073	156,556	109,608	17,082	3,130	438,449	1933	55,541	16,369	11,188	4,051	249	87,398
173,136	312,762	182,666	25,418	4,639	698,621	1934	122,326	28,406	13,417	2,476	157	166,782
74,412	266,144	175,340	11,297	3,741	530,934	1935	60,808	19,504	17,027	1,611	127	99,077
276,548	512,740	199,222	27,226	3,678	1,019,414	1936	100,499	35,917	10,278	4,643	108	151,455
92,639	451,139	117,147	6,836	2,262	670,023	1937	52,727	57,620	10,193	1,626	154	122,320
57,439	367,827	128,574	21,650	1,655	577,145	1938	35,117	12,071	6,792	2,254	148	56,412
149,046	292,203	120,901	9,835	4,483	576,468	1939	142,770	13,744	6,874	728	377	164,493
88,690	356,969	209,749	18,063	3,330	676,801	1940	27,772	4,083	2,349	20	...	34,224
97,695	233,438	163,058	17,298	3,008	514,497	1941	59,373	16,373	15,345	2,322	316	93,729
56,886	291,392	117,532	10,437	843	477,090	1942	56,977	22,962	11,853	1,093	378	93,263
177,000	167,024	70,727	6,657	1,934	423,342	1943	110,086	4,265	4,638	1,924	290	121,203
40,585	123,988	82,560	21,108	819	269,060	1944	47,448	29,283	6,221	1,223	442	84,617
58,984	140,319	73,752	9,923	1,765	284,743	1945	18,666	18,381	11,582	638	222	49,489
50,808	89,164	88,544	12,122	688	241,326	1946	70,817	39,544	22,049	695	305	133,410
83,407	115,916	81,921	4,343	456	286,043	1947	146,788	23,640	5,417	512	111	176,468
23,916	66,743	82,494	2,689	151	175,993	1948	33,574	47,393	31,348	79	79	112,473
47,751	70,866	39,863	1,526	723	160,729	1949	54,146	3,976	11,210	512	129	69,973
135,595	88,452	49,703	5,315	803	279,868	1950	31,644	28,737	8,885	1,135	127	70,528
15,344	116,730	43,007	3,440	183	178,704	1951	25,857	18,576	16,135	719	231	61,518
64,685	38,317	110,249	4,106	182	217,539	1952	14,852	23,113	49,359	94	20	87,438
142,477	131,958	138,117	3,364	624	416,540	1953	37,758	32,186	46,738	88	127	116,897
66,355	98,245	79,021	6,784	639	251,054	Aver.	48,159	26,483	20,894	570	179	96,281

KODIAK AREA (Cases)						YEAR	COOK INLET (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
108,787	331,000	50,134	8,222	283	498,426	1933	98,510	5,591	5,277	16,419	14,710	140,867
151,924	420,684	73,588	9,151	344	655,691	1934	154,697	48,186	9,141	25,665	19,148	256,837
119,720	534,083	42,130	6,753	350	703,036	1935	104,694	22,506	14,400	14,977	18,863	175,440
202,983	394,025	39,248	17,548	620	654,424	1936	188,063	51,350	23,780	31,345	19,723	314,261
120,674	769,055	29,353	14,179	357	933,618	1937	109,471	21,528	12,976	14,005	24,674	182,654
142,112	450,098	69,792	14,716	316	677,034	1938	170,725	54,894	16,260	32,745	16,060	290,684
115,604	603,492	62,185	9,442	651	791,374	1939	183,304	15,570	20,726	13,076	16,554	249,230
93,751	443,154	60,332	14,246	313	611,796	1940	129,952	122,437	26,695	46,015	15,995	341,093
121,725	508,306	57,368	22,854	638	710,891	1941	90,885	38,235	24,706	31,105	27,448	212,379
83,340	313,711	76,563	10,751	363	484,728	1942	98,418	55,722	40,110	61,734	28,617	284,604
129,105	555,209	41,766	5,682	308	730,070	1943	102,746	60,540	26,292	23,447	30,963	243,988
142,212	335,683	56,035	5,623	183	539,736	1944	156,799	96,694	23,311	25,442	25,668	327,914
154,513	491,346	64,957	5,640	521	716,977	1945	118,849	54,370	28,302	28,718	22,420	252,659
65,810	541,334	37,817	3,982	34	648,977	1946	105,065	60,101	31,593	35,835	17,191	249,785
85,805	494,211	23,133	6,752	27	609,928	1947	106,180	30,073	21,183	34,430	30,718	222,584
98,030	303,564	93,918	4,046	189	499,747	1948	133,828	75,678	38,086	29,462	32,688	309,742
69,861	208,537	63,632	5,055	803	347,888	1949	165,588	19,139	21,844	26,783	31,234	264,588
64,463	266,694	73,846	5,786	408	411,197	1950	207,032	62,528	52,572	63,565	34,247	419,944
81,117	126,238	89,926	8,842	5,996	312,119	1951	171,030	24,296	21,884	27,707	59,973	304,890
89,888	281,405	141,730	4,678	1,963	519,664	1952	94,951	115,666	30,095	20,252	22,931	283,895
47,451	273,344	68,239	5,143	328	394,505	1953	101,206	27,208	41,457	18,880	28,951	217,703
89,915	332,236	71,323	5,555	1,045	500,074	Aver.	136,053	56,575	31,033	31,107	30,602	285,370

PRINCE WILLIAM SOUND and RESURRECTION BAY (cases)						YEAR	COPPER and BERING RIVER AREA (cases)				REGIONAL GRAND TOTAL
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Cohoes	Kings	TOTAL	
12,786	194,646	31,672	8,317	723	248,144	1933	56,787	11,232	4,691	72,710	1,485,994
14,549	389,676	34,421	13,661	715	453,022	1934	92,838	158	3,469	96,465	2,327,418
16,096	201,756	53,226	3,447	621	275,146	1935	8,453	9,385	760	18,598	1,802,231
13,440	609,537	23,660	5,245	431	652,313	1936	75,296	15	2,513	77,824	2,869,691
8,492	182,762	21,941	6,651	329	220,175	1937	78,238	5,463	3,868	87,569	2,216,359
10,615	461,114	31,218	6,846	251	510,044	1938	65,777	155	2,514	68,446	2,179,765
12,390	129,491	28,756	3,858	257	174,752	1939	52,285	1,116	2,192	55,593	2,011,910
7,065	521,745	54,001	10,257	182	593,250	1940	37,847	30,521	1,337	69,705	2,326,869
7,083	217,007	73,776	6,430	100	304,396	1941	36,868	83,142	3,067	123,077	1,958,969
13,289	366,965	82,633	13,703	449	477,039	1942	47,849	84,322	5,262	137,433	1,954,157
9,285	511,818	30,620	8,237	2,595	562,555	1943	57,418	21,837	4,893	84,148	2,165,306
12,741	416,848	118,159	7,902	158	555,808	1944	62,780	34,949	2,517	100,246	1,877,381
17,382	493,482	154,080	4,941	102	669,987	1945	70,744	41,103	6,037	117,884	2,091,739
10,432	317,329	76,003	16,037	408	420,209	1946	45,645	25,821	7,145	78,611	1,772,318
17,955	380,017	65,018	7,270	180	470,440	1947	30,717	22,231	3,596	56,544	1,822,007
19,115	123,411	47,008	5,048	74	194,656	1948	13,536	28,405	1,237	43,180	1,335,791
8,423	275,830	83,195	13,016	167	380,631	1949	46,404	15,986	1,964	64,354	1,288,163
7,179	111,838	57,464	12,441	88	189,010	1950	70,592	18,997	4,517	94,106	1,184,785
66,871	47,249	56,680	30,555	5,195	206,550	1951	39,963	24,513	3,737	68,213	1,067,687
107,471	118,905	68,430	37,987	9,231	342,024	1952	5,247	2	608	5,857	1,456,417
5,355	124,122	34,929	4,454	37	168,897	1953	51,136	3,884	3,163	58,183	1,372,725
27,292	240,903	76,097	13,965	1,564	359,821	Aver.	43,676	21,589	3,452	68,718	1,526,901

NOTE — Figures are based on U. S. Fish & Wildlife Service final data, which DO NOT include fish caught in these areas and canned elsewhere, and accordingly are somewhat different from those in other tables compiled independently by Pacific Fisherman. Figures for the latest year shown are preliminary. "Average" figures are for the last ten years.

Paramount
COHOE
SALMON
Paramount
PINK
SALMON
Paramount
ALBACORE
SOLID WHITE TUNA
Paramount
HERRINGS
Paramount
HERRINGS
Paramount
3 MINUTE
SALMON CROQUETTES
Paramount
A distinguished family of canned ocean foods—
Paramount
SOCKEYE
SALMON

Paramount
FANCY
CRABMEAT

NOW—

Paramount
fancy CRABMEAT

NELSON BROS. FISHERIES LTD.
VANCOUVER, B.C.

Packers of Canned Salmon, Pilchards, Tuna, Herring. Producers of Fish Meals and Oils.

Cable address - Nelbro

Dehn & Co., Inc.

Colman Bldg.
SEATTLE 4, WASH.
Phone: SEneca 2214

Distributors and Selling Agents

CANNED SALMON

and other
Pacific Coast Products

•

DOMESTIC — FOREIGN

•

Cable Address: "DENCO"
Codes: CALPAK — ACME — PRIVATE

WEYAND & CO.

COLMAN BUILDING
Seattle 4, Wash. Phone: Eliot 8520

Distributors

CANNED SALMON

and other
SEAFOOD PRODUCTS

Our Brands

RED MAJOR
OCEAN QUEEN
PACIFIC LEADER
NAKAT
SEA FRESH
WESTERN LEADER
HARVEST TIME

1953 -RECAPITULATION OF ALASKA CANNED SALMON PACK-1953

DISTRICT	RED or SOCKEYE				PINK			CHUM				Medium RED or COHO			KING or CHINOOK			GRAND TOTAL (Full Cases)
	1-lb. Talls	1-lb.and 4-lb. Flats	½-lb.Flats (8-doz.)	TOTAL	1-lb. Talls etc.	½-lb.Flats (8 doz.)	TOTAL	1-lb. Talls	1-lb.& 4-lb. Flats	½-lb. Flats (8doz)	TOTAL	1-lb. Talls & Flats,etc.	½-lb.Flats (8 doz.)	TOTAL	1-lb. Talls & Flats	½-lb. Flats (8 doz)	TOTAL	
Western Alaska	458,366	(1) 19,121	52,699	530,186	1,108	...	1,108	35,462	...	9,936	45,398	726	1,977	2,703	8,323	12,487	20,810	600,205
Central Alaska	200,876	(2) 86	129,971	330,933	(3) 575,215	29,066	604,281	320,705	(2) 2,404	10,281	333,390	(5) 31,200	5,530	36,730	(7) 18,890	14,270	33,160	1,338,494
Southeast Alaska	85,166	(2) 7,026	28,779	120,971	(4) 313,413	42,167	355,580	406,929	(2) 3,766	7,565	418,260	(6) 79,781	10,708	90,489	(8) 1,539	32	1,571	986,871
TOTAL	744,408	26,233	211,449	982,090	889,736	71,233	960,969	763,096	6,170	27,782	797,048	111,707	18,215	129,922	28,752	26,789	55,541	2,925,570

NOTES: — Salmon FROZEN in the three regions of Alaska and canned elsewhere are included in the above figures for the regions of origin.

(1) All 1-lb. Flats. (2) All 4-lb. Flats. (3) Includes 95 cases 4-lb Flats. (4) Includes 676 cases 4-lb. Flats. (5) Includes 479 cases 4-lb. Flats. (6) Includes 933 cases 4-lb. Flats.. (7) Includes 54 cases 4-lb. Flats. (8) Includes 202 cases Steelhead Talls.

1953-CANNED SALMON PACK OF PACIFIC AMERICAN FISHERIES, INC.-1953

DISTRICT AND CANNERY LOCATION	RED or SOCKEYE				PINK			CHUM				COHO			KING or CHINOOK			GRAND TOTAL
	1-lb. Talls	1-lb. Flats	½-lb. Flats (8 doz.)	Total	1-lb. Talls	½-lb. Flats (8 doz.)	Total	1-lb. Talls	4-lb. Flats	½-lb. Flats (8 doz.)	Total	1-lb. Talls	½-lb. Flats (8 doz.)	Total	1-lb. Talls	½-lb. Flats (8 doz.)	Total	
WESTERN ALASKA																		
Naknek	22,578	9,753	...	32,331	...	...	...	3,260	...	...	3,260	...	...	...	254	...	254	35,845
Port Moller	7,352	...	9,853	17,205	1,100	...	1,100	6,022	...	134	6,156	555	1,868	2,423	385	10	395	27,279
TOTAL Western Alaska	29,930	9,753	9,853	49,536	1,100	...	1,100	9,282	...	134	9,416	555	1,868	2,423	639	10	649	63,124
CENTRAL ALASKA																		
King Cove	10,068	...	12,850	22,918	32,014	315	32,329	44,754	...	1,559	46,313	597	...	597	57	5	62	102,219
Squaw Harbor	579	...	7,531	8,110	19,955	505	20,460	11,058	...	1,185	12,243	539	...	539	139	...	139	41,491
Chignik	2,958	...	...	2,958	60	...	60	161	...	...	161	...	...	...	11	...	11	3,190
Alitak	4,872	...	1,018	5,890	39,063	1,504	40,567	3,412	...	129	3,541	59	1	60	3	19	22	50,080
TOTAL Central Alaska	18,477	...	21,399	39,876	91,092	2,324	93,416	59,385	...	2,873	62,258	1,195	1	1,196	210	24	234	196,980
SOUTHEAST ALASKA																		
Petersburg	486	...	1,416	1,902	9,975	...	9,975	11,780	...	...	11,780	105	2,012	2,117	28	18	46	25,820
Pillar Bay	...	...	566	566	1,815	...	1,815	1,931	...	...	1,931	...	449	449	12	12	24	4,785
Kasaan	3,040	...	...	3,040	15,295	...	15,295	5,746	...	...	5,746	2,445	...	2,445	16	...	16	26,542
TOTAL Southeast Alaska (a)	3,526	...	1,982	5,508	27,085	...	27,085	19,457	...	...	19,457	2,550	2,461	5,011	56	30	86	(a) 57,147
TOTAL ALASKA	51,933	9,753	33,234	94,920	119,277	2,324	121,601	88,124	...	3,007	91,131	4,300	4,330	8,630	905	64	969	317,251
PUGET SOUND																		
Bellingham	...	...	2,961	2,961	1,919	1,452	3,371	7	5,867	...	5,874	...	173	173	...	19	19	12,398
GRAND TOTAL	51,933	9,753	36,195	97,881	121,196	3,776	124,972	88,131	5,867	3,007	97,005	4,300	4,503	8,803	905	83	988	329,649

NOTES: — Pacific American Fisheries' packs at Chignik made through joint operation in plants of Alaska Packers Association. Pillar Bay fish were all canned in P. A. F. plant at Petersburg, in joint operation with Fidalgo Island Packing Co. (P. A. F. share only being shown here).

Joint operations conducted in other P. A. F. plants were: Squaw Harbor, with Alaska Pacific Salmon Co.; and Alitak, with Alaska Packers Association. (a) Southeast Alaska pack does not include purchased share of Excursion Inlet Packing Co. output, credited to that company in Southeast Alaska table.

1953 -CENTRAL ALASKA CANNED SALMON PACK- 1953

	COMPANY	CANNERY LOCATION	RED OR SOCKEYE			PINK			CHUM			COHO			KING OR CHINOOK			GRAND TOTAL (full cases)	
			1 & 4 lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1 & 4 lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1 & 4 lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1-lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1-lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL		
1	Alaska Pacific Salmon Co.	Sand Point	372	5,978	6,350	24,752	...	24,752	13,804	...	13,804	757	...	757	1	155	156	45,819	1
2	Alaska Packers Association	Chignik	19,761	...	19,761	13,806	...	13,806	19,275	...	19,275	73	...	73	60	...	60	52,975	2
		Alitak (2)	1,208	...	1,208	13,143	...	13,143	637	...	637	78	...	78	...	...	...	15,066	
		Karluk (3)	1,499	1,325	2,824	23,033	1	23,034	4,965	777	5,742	251	77	328	85	...	85	32,013	
3	Alaska Shell Fish, Inc.	Seldovia	(1) 86	2,400	2,486	(1) 95	2,071	2,166	(1) 2,404	749	3,153	(1) 479	194	673	(1) 54	1,597	1,651	10,129	3
4	Alaska Year Round Canneries Co. & General Fish Co., Inc.	Seldovia	8,956	2,521	11,477	2,946	146	3,092	5,565	47	5,612	3,126	601	3,727	5,166	167	5,333	29,241	4
5	Alaskan Fisheries, Inc.	Valdez	229	...	229	2,950	...	2,950	4,333	...	4,333	393	...	393	...	...	...	7,905	5
6	Berman Packing Co.	Ninilchik	...	3,260	3,260	...	...	...	...	531	531	...	637	637	...	580	580	5,008	6
7	Chignik Fisheries Co.	Chignik (4)	13,980	...	13,980	18,320	...	18,320	27,277	...	27,277	15	...	15	49	...	49	59,641	7
8	Cook Inlet Packing Co.	Seldovia	2,091	...	2,091	164	...	164	...	...	...	561	...	561	914	...	914	3,730	8
9	Copper River Co-Op Co., Inc.	Copper River & Eshamy Bay (1)	...	2,903	2,903	...	2,533	2,533	...	1,143	1,143	...	107	107	...	261	261	6,947	9
10	Copper River Packing Co.	Port Nellie Juan	449	...	449	15,048	...	15,048	6,812	...	6,812	747	...	747	...	...	...	23,056	10
11	Cordova Fish & Cold Storage Co.	Cordova	...	2,530	2,530	...	...	...	...	...	...	...	2,788	2,788	...	128	128	5,446	11
12	Crystal Falls Fish Co.	Crystal Falls (Cordova)	854	194	1,048	...	...	...	...	...	...	679	...	679	47	...	47	1,774	12
13	Ellamar Packing Co.	Port Nellie Juan (5)	74	...	74	4,915	...	4,915	400	...	400	127	...	127	...	...	...	5,516	13
14	Emard Packing Co.	Anchorage	9,171	(14) 4,362	13,533	...	...	...	6,091	...	6,091	4,154	(14) 663	4,817	217	(14) 7,440	7,657	32,098	14
15	Fidalgo Island Packing Co.	Port Graham	8,154	...	8,154	4,384	...	4,384	4,264	...	4,264	633	...	633	2,233	...	2,233	19,698	15
16	Halferty Canneries, Inc.	Uganik Bay (6)	5,343	...	5,343	14,498	...	14,498	6,457	...	6,457	508	...	508	3	...	3	26,809	16
		Cordova (7)	1,640	13,919	15,559	11,537	...	11,537	4,042	...	4,042	122	...	122	...	903	903	32,168	
17	P. E. Harris Co., Inc.	False Pass	27,932	...	27,932	33,257	...	33,257	51,051	...	51,051	1,381	...	1,381	...	...	...	113,621	17
18	J. H. Hoekzema Canning Co.	Kasilof	...	3	3	...	...	...	...	...	...	...	30	30	...	30	30	63	18
19	Island Seafoods Co.	Kodiak, etc. (1) (8)	...	2,378	2,378	...	6,150	6,150	...	511	511	...	116	116	...	...	...	9,155	19
20	Kadiak Fisheries Co.	Port Bailey	8,670	...	8,670	78,575	...	78,575	17,800	...	17,800	1,276	...	1,276	80	...	80	106,401	20
21	Libby, McNeill & Libby	Moser Bay & Kenai	14,896	19,606	34,502	17,191	10,921	28,112	8,384	1,960	10,344	4,643	14	4,657	5,823	28	5,851	83,466	21
22	Malaspina Fisheries Co.	Ouzinkie (9)	...	...	...	1,460	...	1,460	535	...	535	11	...	11	...	...	...	2,006	22
23	New England Fish Co.	Orca & Port Bailey (10)	6,602	12,763	19,365	33,345	...	33,345	11,416	...	11,416	1,490	...	1,490	1	862	863	66,479	23
24	Ouzinkie Packing Corp.	Ouzinkie	2,348	...	2,348	15,492	...	15,492	6,616	...	6,616	479	...	479	15	...	15	24,950	24
25	Pacific American Fisheries, Inc.	King Cove, Squaw Harbor, Chignik & Alitak *	18,477	21,399	39,876	91,092	2,324	93,416	59,385	2,873	62,258	1,195	1	1,196	210	24	234	196,980	25
26	Parks Canneries (11)	Uyak, Seldovia, Ivanof Bay & Cordova	16,817	18,038	34,855	54,339	...	54,339	27,309	...	27,309	1,435	...	1,435	6	875	881	118,819	26
27	Peninsula Packers	False Pass, etc. (1)	10,245	...	10,245	172	...	172	3,606	...	3,606	...	...	...	20	...	20	14,043	27
28	Port Chatham Packing Co.	Portlock	...	5,370	5,370	...	2,579	2,579	...	896	896	...	127	127	...	96	96	9,068	28
29	Resurrection Bay Co.	Seward	426	...	426	1,886	...	1,886	377	...	377	369	...	369	...	...	...	3,058	29
30	San Juan Fishing & Packing Co.	Port San Juan	1,223	...	1,223	40,065	...	40,065	4,263	...	4,263	1,330	...	1,330	8	...	8	46,889	30
		Uganik Bay	2,788	...	2,788	18,650	...	18,650	8,010	...	8,010	725	...	725	40	...	40	30,213	
31	Seldovia Bay Packing Co.	Seldovia & Cordova (12)	13,460	7,169	20,629	9,670	929	10,599	9,315	446	9,761	3,026	101	3,127	3,858	1,096	4,954	(12) 49,070	31
32	Uganik Fisheries Co.	Uganik Bay	2,171	...	2,171	11,554	...	11,554	5,290	...	5,290	455	...	455	...	...	...	19,470	32
33	Washington Fish & Oyster Co.	Ouzinkie (13)	1,040	...	1,040	8,735	...	8,735	2,617	...	2,617	652	...	652	...	...	...	13,044	33
34	West Point Canning Co.	Uganik Bay	...	1,200	1,200	...	582	582	...	274	274	...	...	...	...	...	...	2,056	34
	Miscellaneous	Various Points	...	2,653	...	...	...	...	...	...	...	...	74	74	...	28	28	2,755***	
	TOTAL, CENTRAL ALASKA CANNERIES		200,962	129,971	330,933	565,074	28,236	593,310	322,300	10,207	332,507	31,200	5,530	36,730	18,890	14,270	33,160	1,326,640	

FREEZERSHIP PACK – Salmon frozen in Central Alaska and canned elsewhere **

	COMPANY	CANNERY LOCATION	RED OR SOCKEYE			PINK			CHUM			COHO			KING OR CHINOOK			GRAND TOTAL (full cases)	
1	Arctic Maid Fisheries	"Arctic Maid" (A)	...	...	...	2,894	...	2,894	...	...	. .	...	...	...	...	...	...	2,894	1
2	North Star Fisheries	"North Star" (B)	...	...	...	6,705	830	7,535	627	74	701	...	...	...	...	...	..	8,236	2
3	Pacific Queen Fisheries	"Pacific Queen" (B)	...	...	...	542	...	542	182	...	182	...	...	...	...	...	...	734	3
	TOTAL FREEZERSHIPS		...	...	...	10,141	830	10,971	809	74	883	...	...	...	...	...	..	11,854	
	GRAND TOTAL		200,962	129,971	330,933	575,215	29,066	604,281	323,109	10,281	333,390	31,200	5,530	36,730	18,890	14,270	33,160	1,338,494	

NOTES: – (1) All 4-lb. Flats, six to the case. (2) Canned through joint operation in P. A. F. plant, Alitak. (3) Canned in plants of P. A. F., Alitak; Kadiak Fisheries Co., Port Bailey, and Seldovia Bay Packing Co., Seldovia. (4) Canned in Alaska Packers Association plant, Chignik. (5) Canned through joint operation in Copper River Packing Co. plant. (6) Canned in San Juan plant, Uganik Bay. (7) Canned in Western Fisheries Co. plant, Cordova (8) Includes some custom-canned in Ouzinkie Packing Corp. plant. (9) Kodiak and South Peninsula area fish, frozen on ship "Michelle Eve" and custom-canned in Ouzinkie Packing Corp. plant. (10) Includes share from joint operation in Kadiak Fisheries plant.

***Estimated.

(11) Consolidated operation of Parks Canning Co., H. M. Parks Co., Western Fisheries Co. and Ivanof Bay Packing Co. (12) Includes some Reds and Kings custom-canned in plant of Cordova Fish and C. S. Co. (13) Canned in plant of Ouzinkie Packing Corp. (14) Tuna-size Halves, figured on basis of 48 lbs. net per case.

**Does not include any fish canned in Central Alaska; such fish, originating in this region, is included in the general Central Alaska table above. FREEZERSHIP fish from this region was canned in the following Puget Sound plants: (A) Washington Fish & Oyster Co., Seattle; (B) Friday Harbor Canning Co., Friday Harbor.

*Packs of Pacific American Fisheries, Inc., are tabulated in detail on another page of this issue.

Oceanic Sales Company

3302 SMITH TOWER
SEATTLE 4, WASH.

ALASKA—PUGET SOUND—COLUMBIA RIVER

CANNED SALMON

ALASKA CRAB MEAT
NORTHWEST TUNA
MINCED RAZOR CLAMS

BRANDS—

Columbia River Fancy Chinook and Blueback
Gill Netters Best
Co-Operators Best

Red Alaska Sockeye
Red-E-Lunch
Hummer

Puget Sound Sockeye
Coatarms

Pink
Oceanic
Down South
Seafed
Seafarer

Cohoe
Redman
Salad

Chinook
Springkist

Chum
Tomah
Overland
Ben Hur
Western Star
Tennis

Crab Meat
Oceanic

Tuna
Oceanic
Seafed

Clams
Oceanic
Seafed

Cable Address:
"NAECO" All Codes

Exclusive Sales Agents For:

UNION FISHERMEN'S CO-OPERATIVE PACKING COMPANY'S

Complete Line of Columbia River Fisheries Products

. . . facing facts

TODAY, two jobs face the canned salmon industry. Salmon runs must be rehabilitated. Production costs must be reduced.

To do this, sound fishing regulations must be carefully worked out to the best interests of the **entire** industry. Expensive duplication of effort and equipment must be eliminated.

As always, Pacific American Fisheries stands ready to meet the challenge of the day, and to assume its share of leadership and responsibility in solving these major problems. Working together, we can return our industry to its rightful status—a profitable operation with a sound future.

The fact remains that canned salmon has always been a great economy food. Today, the industry must "face facts"—and work to keep it so.

PACIFIC AMERICAN FISHERIES, Inc.

BELLINGHAM, WASHINGTON

Quality Always

Sales Subsidiary: DEMING & GOULD COMPANY, South Bellingham

SALMON
S. E. ALASKA

S. E. Alaska Pinks' Failure Is Crushing

Despite the fact that only four years before — two cycles — Southeast Alaska had experienced one of the heaviest runs of Pinks ever recorded in that region, the pack there in 1953 was only 355,000 cases, not much more than a third of the regional average for 10 years, a decade which of course includes 5 years of the "poor-year" cycle as well as 5 of the "good year" cycle, of which 1953 was a part. Two years before the area had packed 1,226,000 cases of Pinks, and in 1949 a pack of 2,102,000 cases were put up out of the great run, despite reasons which failed to permit the industry to utilize the run fully.

In four years the Pink pack of Southeast Alaska had dropped to one-sixth of the 1949 production.

The disaster in Southeast Alaska was due solely to the condition prevailing in Pinks. Reds were **good,** although Southeast Alaska is a relatively small producer of their species. The Chum run went above average, although falling short of the big yield of 1952 by nearly 110,000 cases.

Southeast Alaska as a whole was short of 1 million cases for the first time since 1921.

Southeast Alaska Canned Salmon Packs by Subdivisions

YAKUTAT AREA (Cases)						YEAR	CAPE FAIRWEATHER — DIXON ENTRANCE* (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
11,686	5,774	275	15,331	3,216	36,282	1933	69,440	1,472,239	424,586	80,474	4,930	2,051,669
19,407	4,788	311	30,316	4,633	59,455	1934	84,991	2,617,574	393,901	128,211	10,961	3,235,638
20,006	4,966	148	15,766	2,081	42,967	1935	139,423	2,195,094	540,800	126,727	9,027	3,011,071
22,545	9,737	105	13,609	1,102	47,098	1936	195,462	2,915,407	778,234	121,113	19,403	4,029,619
17,470	7,826	385	11,242	1,794	38,717	1937	150,274	2,135,342	503,381	77,283	28,899	2,895,179
27,211	7,417	397	26,854	1,450	63,329	1938	165,380	1,879,352	474,056	116,911	14,920	2,650,619
25,463	2,237	47	9,301	1,629	38,677	1939	169,895	1,473,121	296,057	56,935	812	1,996,820
14,947	4,962	164	27,747	511	48,331	1940	110,661	1,453,109	485,623	128,333	713	2,178,439
18,624	4,505	566	41,402	799	65,896	1941	119,235	3,636,256	319,372	152,569	1,005	4,228,437
11,005	2,465	10	21,513	96	35,089	1942	105,506	1,753,582	596,171	156,409	1,950	2,613,618
18,096	1,618	—	12,606	234	32,554	1943	67,247	1,036,821	673,692	80,928	1,626	1,860,314
15,386	3,447	3	14,301	789	33,926	1944	116,922	1,082,648	663,505	74,543	1,008	1,938,626
18,079	795	105	18,018	576	37,573	1945	111,717	1,040,854	266,732	90,687	1,980	1,511,970
4,081	1,939	23	4,056	358	10,457	1946	54,348	997,975	322,597	88,891	2,058	1,465,869
5,632	1,169	255	4,052	160	11,268	1947	50,273	679,648	257,689	69,490	3,843	1,060,943
3,589	4,042	506	10,840	305	19,282	1948	36,118	680,400	406,887	148,384	5,380	1,277,169
—	—	No operation in 1949		—	—	1949	39,552	2,103,982	243,483	124,919	1,015	2,512,951
9,154	1,873	647	6,252	271	18,197	1950	36,720	533,789	499,775	110,092	195	1,180,571
11,748	1,675	725	11,732	95	25,975	1951	58,569	1,224,907	465,609	252,661	541	2,002,287
5,425	1,813	1,302	19,113	660	28,313	1952	69,085	591,609	526,658	103,164	2,096	1,292,612
—	—	No operation in 1953†		—	—	1953	125,958	353,247	410,384	86,479	1,414	977,482
7,309	1,675	357	8,836	321	18,499	Aver.	69,926	867,706	406,332	114,931	1,953	1,522,048

ICY STRAIT DISTRICT (Cases)							WESTERN DISTRICT (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
29,480	290,238	97,556	14,480	47	431,801	1933	—	—	—	—	—	—
32,035	340,032	97,572	20,291	3,216	493,146	1934	—	—	—	—	—	—
60,601	185,700	76,562	16,152	2,707	341,722	1935	—	—	—	—	—	—
69,191	349,700	183,036	20,791	5,583	628,301	1936	25,290	242,902	148,839	12,503	2,774	432,308
39,640	208,448	56,621	6,906	405	312,020	1937	18,477	194,675	90,053	5,616	24	308,845
46,526	158,698	52,890	14,058	215	272,387	1938	20,868	163,377	56,116	8,394	48	248,803
46,675	78,127	38,943	3,615	151	167,511	1939	24,839	87,137	35,328	3,628	36	150,968
18,846	121,320	74,615	13,409	262	228,452	1940	13,319	176,542	100,444	16,400	58	306,763
8,948	218,163	17,418	10,231	232	254,992	1941	16,962	562,046	56,078	22,368	456	657,910
10,964	118,790	44,834	8,311	248	183,147	1942	15,193	339,504	130,855	26,112	71	511,735
11,397	60,881	63,985	3,147	124	139,534	1943	16,266	123,318	177,210	9,039	55	325,888
21,568	123,896	67,537	3,830	77	216,908	1944	21,771	277,172	191,816	7,384	7	498,150
13,827	45,971	25,095	4,789	278	89,960	1945	23,247	109,183	65,431	6,585	19	204,465
6,315	26,449	31,376	4,436	60	68,636	1946	14,813	81,192	74,500	6,837	479	177,821
6,504	30,952	14,498	3,014	118	55,086	1947	17,718	92,612	57,592	14,658	837	183,417
501	2,745	6,893	1,239	—	11,378	1948	11,308	54,905	64,803	37,562	555	169,133
5,665	51,485	29,760	10,436	41	97,387	1949	12,580	378,876	43,136	29,721	442	464,755
3,362	3,287	25,164	5,473	22	37,308	1950	17,363	24,846	60,584	29,992	54	132,839
8,616	30,315	33,741	13,369	142	86,183	1951	16,195	147,996	107,998	65,040	6	337,235
11,169	17,919	26,184	7,355	217	62,844	1952	13,642	84,743	82,371	18,130	208	199,094
21,660	11,830	26,669	20,739	430	81,328	1953	26,068	34,900	108,921	3,167	86	173,142
9,918	34,485	28,692	7,468	139	70,963	Aver.	17,470	128,642	85,715	21,591	269	254,015

* Cape Fairweather to Dixon Entrance comprises all Southeast Alaska with the exception of Yakutat, therefore figures in this section are the total of all the following districts. Final data for Southeast Alaska has not been reported by subdivisions since 1949.

† Catch canned at Icy Strait and Wrangell plants.

NOTE: — Figures are based on U. S. Fish and Wildlife Service final data, which DO NOT include fish caught in these areas and canned elsewhere, and accordingly are somewhat different from those in other tables compiled independently by Pacific Fisherman. Figures for the latest year shown are preliminary. "Average" figures are for the last ten years.

BRISTOL BAY SALMON PACKS

(Based on preliminary data, not identical with final figures shown in some other tabulations.)

YEAR	NUSHAGAK	NAKNEK-KVICHAK	EGEGIK	UGASHIK	TOTAL	YEAR
1940	166,208	26,786	16,435	....	450,229	1940
1941	172,835	417,564	29,894	3,555	623,848	1941
1942	196,671	222,281	....	48,239	467,191	1942
1943	282,100	958,144	....	78,110	1,318,354	1943
1944	270,034	588,414	44,113	80,241	982,802	1944
1945	222,738	351,638	....	67,577	641,953	1945
1946	151,216	424,904	22,671	48,534	647,325	1946
1947	220,181	1,015,246	73,422	63,408	1,372,369	1947
1948	262,581	829,407	96,488	127,692	1,316,168	1948
1949	79,173	346,287	84,294	53,266	563,020	1949
1950	115,019	345,587	59,992	65,957	586,555	1950
1951	31,143	239,289	43,590	25,090	339,112	1951
1952	81,720	600,009	52,277	21,594	755,600	1952
1953	36,544	342,266	63,818	45,455	488,083	1953

NOTE: — The above table covers fish canned in the district; and does not include fish frozen on Bristol Bay and subsequently canned elsewhere.

ESTABLISHED 1898

ANDERSON & MISKIN, LTD.

EXPORTERS

CANNED FISH

- Canadian Salmon
- American Salmon
- Canadian Herring
- Canadian Pilchards
- California Pilchards
- California Sardines
- California Mackerel
- California Squid

OFFICES

Colman Building
SEATTLE

260 California Street
SAN FRANCISCO

448 Seymour Street
VANCOUVER, CANADA

CABLE ADDRESS — MISKAND

1953-SOUTHEAST ALASKA CANNED SALMON PACK-1953

	COMPANY	CANNERY LOCATION	RED or SOCKEYE			PINK			CHUM			COHO			KING	GRAND TOTAL (full cases)	
			1 lb.Talls etc.	½ lb.Flats (8 doz)	Total	1 lb.Talls etc.	½ lb.Flats (8 doz)	Total	1 lb.Talls etc.	½ lb.Flats (8 doz)	Total	1 lb.Talls etc.	½ lb.Flats (8 doz)	Total	1-lb. Talls etc.		
1	Annette Island Canning Co.	Metlakatla	2,847	...	2,847	18,283	...	18,283	27,645	...	27,645	1,215	...	1,215	...	49,990	1
2	Excursion Inlet Packing Co.	Excursion Inlet	9,703	...	9,703	3,107	4,804	7,911	9,136	...	9,136	950	...	950	336	28,036	2
3	Farwest Wrangell Co.	Wrangell	688	3,345	4,033	12,247	5,195	17,442	35,975	...	35,975	14,923	...	14,923	478	72,851	3
4	Fidalgo Island Packing Co.	Ketchikan	1,688	...	1,688	13,428	...	13,428	5,243	...	5,243	1,345	...	1,345	...	21,704	4
		Pillar Bay (1)	566	...	566	1,815	...	1,815	1,936	...	1,936	41	...	41	18	4,376	
5	Haines Packing Co.	Setnikof Cove	...	8,162	8,162	...	78	78	...	1,510	1,510	...	156	156	(8) 2	9,908	5
6	P. E. Harris Co., Inc.	Hawk Inlet	9,678	...	9,678	6,444	...	6,444	14,838	...	14,838	582	...	582	...	31,542	6
7	Hood Bay Salmon Co.	Hood Bay	530	...	530	4,707	...	4,707	31,404	...	31,404	281	...	281	...	36,922	7
8	Hydaburg Cooperative Assn.	Hydaburg	2,005	...	2,005	6,153	...	6,153	908	...	908	690	...	690	...	9,756	8
9	Icy Straits Salmon Co.	Hoonah	11,967	...	11,967	3,910	...	3,910	17,525	...	17,525	19,781	...	19,781	(9) 213	53,396	9
10	Independent Salmon Canneries, Inc.	Ketchikan	2,592	...	2,592	7,909	...	7,909	16,431	...	16,431	1,910	...	1,910	38	28,880	10
11	Kayler-Dahl Fish Co., Inc.	Petersburg	...	5,748	5,748	738	5,074	5,812	14,176	4,102	18,278	1,270	4,748	6,018	...	35,856	11
12	Keku Canning Co.	Kake	574	...	574	5,305	...	5,305	14,189	...	14,189	1,691	...	1,691	...	21,759	12
13	Ketchikan Packing Co.	Ketchikan	1,719	...	1,719	10,077	...	10,077	4,438	...	4,438	2,630	...	2,630	...	18,864	13
14	Klawock Oceanside Packing Co.	Klawock	426	548	974	8,498	...	8,498	8,248	...	8,248	1,110	...	1,110	...	18,830	14
15	Libby, McNeill & Libby	George Inlet, Craig & Petersburg (2)	4,151	2,834	6,985	40,441	5,395	45,836	28,520	...	28,520	5,238	1,173	6,411	45	87,797	15
16	Lutak Fish Co.	Lutak Inlet	(6) 1,410	...	1,410	(6) 35	...	35	(6) 150	...	150	(6) 31	...	31	...	1,626	16
17	Marine Fisheries, Inc.	(Floating)*	4	...	4	386	...	386	54	...	54	109	...	109	...	553	17
18	Nakat Packing Corporation	Waterfall, Hidden Inlet & Ketchikan	8,897	5,752	14,649	41,014	21,183	62,197	21,410	1,788	23,198	9,451	1,314	10,765	...	110,809	18
19	New England Fish Company	Chatham, Noyes Island, Ketchikan & Metlakatla	11,748	...	11,748	56,171	...	56,171	(7)62,918	...	62,918	(7) 6,230	...	6,230	(10) 355	137,422	19
20	Northern Products Corp.	Sitka (3)	...	...	...	...	...	...	...	...	...	...	37	37	...	37	20
21	Pacific American Fisheries, Inc.	Petersburg, Pillar Bay & Kasaan (4)	3,526	1,982	5,508	27,085	...	27,085	19,457	...	19,457	2,550	2,461	5,011	(11) 86	57,147	21
22	Pelican Packing Co.	Pelican	2,043	...	2,043	2,561	...	2,561	7,209	...	7,209	294	...	294	...	12,107	22
23	Pyramid Fisheries Co.	Sitka	814	88	902	6,419	107	6,526	9,367	...	9,367	332	...	332	...	17,127	23
24	Sitka Canning Co.	Sitka	...	320	320	...	225	225	...	147	147	...	190	190	...	882	24
25	Superior Packing Co.	Tenakee	714	...	714	2,672	...	2,672	14,828	...	14,828	173	...	173	...	18,387	25
26	Taku Fisheries	Taku	(6) 5,616	...	5,616	(6) 641	...	641	(6) 3,616	...	3,616	(6) 902	...	902	...	10,775	26
27	Todd Packing Co.	Todd	1,177	...	1,117	6,349	...	6,349	12,668	...	12,668	527	...	527	...	20,721	27
28	Vita Food Products, Inc.	Pelican & Sitka (5)	...	...	...	...	31	31	...	18	18	231	479	710	...	759	28
29	Wards Cove Packing Co.	Ketchikan	4,550	...	4,550	20,257	...	20,257	12,452	...	12,452	3,932	...	3,932	...	41,191	29
30	Whiz Fish Products Co.	Tyee	2,518	...	2,518	6,538	...	6,538	8,479	...	8,479	1,320	...	1,320	...	18,855	30
31	Miscellaneous Trollers	Sitka (Custom Canned)	...	...	...	...	75	75	...	...	...	...	150	150	...	225	31
	TOTAL, SOUTHEAST ALASKA CANNERIES		92,151	28,779	120,930	313,190	42,167	355,357	403,220	7,565	410,785	79,739	10,708	90,447	1,571	979,090	
	FREEZERSHIP PACK — Salmon Frozen in Southeast Alaska and Canned Elsewhere. †																
1	Arctic Maid Fisheries	"Arctic Maid" (A)	...	...	...	...	...	...	7,138	...	7,138	...	...	...	...	7,138	1
2	Reefer King Co.	"Reefer King" (B)	41	...	41	223	...	223	337	...	337	42	...	42	...	643	2
	Total Freezerships		41	...	41	223	...	223	7,475	...	7,475	42	...	42	...	7,781	
	GRAND TOTAL		92,192	28,779	120,971	313,413	42,167	355,580	410,695	7,565	418,260	79,781	10,708	90,489	1,571	986,871	

NOTES: — (1) Share from joint operation in P. A. F. cannery, Petersburg. (2) Petersburg plant leased from Scow Bay Packing Co. (3) Canned in Sitka Canning Co. plant. (4) Pacific American Fisheries' pack is tabulated in detail on another page of this issue. (5) Canned in plants of Pelican Packing Co. and Sitka Canning Co. (6) All 4-lb. cans, 12 to case, tabulated with Talls. (7) Includes share from joint fall operation with Annette Island Canning Co., Metlakatla. (8) Halves, full cases. (9) Includes 23 cases Steelheads. (10) Includes 179 cases Steelheads. (11) Includes 30 full cases Halves.

† Freezership salmon from Southeast Alaska were canned in the following Puget Sound plants: (A) Washington Fish & Oyster Co., Seattle (B) Farwest Fishermen, Inc., Anacortes. * New cannery.

B. LOU THRAILKILL, *President* H. RAY CLARK, *Vice President*

SALMON and TUNA SALES CO.

1018 - 2nd Ave.
SEATTLE 4, WASHINGTON
Phone—SEneca 5131

Distributors of

CANNED SALMON

ALASKA **PUGET SOUND** **COLUMBIA RIVER**

NORTHWEST TUNA • DUNGENESS AND ALASKA KING CRAB

And Other Canned Northwest Fish Products

"X-TRA-GOOD"
Brand
SOCKEYE SALMON

S&T
SALT ADDED
PINK SALMON
NET WEIGHT 1 POUND

"QUICK STREAM"
Brand
CHUM SALMON

CABLE ADDRESS — "SANDT"

Specializing in Canned Fish Sales
Under Both Buyers' and Packers' Labels
As well As Our Own Proprietary Brands

KETCHIKAN
PACKING COMPANY

Packers and Distributors of

CANNED SALMON

Table Delicacies
From Alaska's Icy Waters

625 Colman Building MAin 1835 Seattle 4, Wash.

EMARD'S

Fancy CHINOOK Halves
"Center Cuts in Natural Oil"
"RED DUCHESS" BRAND — Famous for Quality

CANNED SALMON

RED TALLS
COHOE TALLS
SOCKEYE HALVES
CHUM TALLS

EAT
MORE
ALASKA
RED **CANNED SALMON**
DELICACY

All our Salmon guaranteed canned from freshly caught Salmon that has never been frozen.

EMARD PACKING COMPANY, INC.

Seattle Office:
615 Lowman Bldg.

Cannery:
Anchorage, Alaska

SALMON
S. E. ALASKA

Synopsis by Species

Species-wise, the situation in Alaska's 1953 pack was this:

Red—About two-thirds of the 10-year average, with 982,000 cases against an average of 1,244,000. In 1952—also a poor year in this species and in the Territory as a whole—the Red pack was 1,181,000.

Pink—This variety suffered even more than did the Red. The pack in 1953 was 960,000 cases, against an average for the decade of 1,688,000. The short pack of 1952, itself short, was 1,172,000 cases.

Chum—The 1953 pack of 797,000 cases exceeded the 733,000-case average, but was short of the great Chum pack of 1952, which amounted to 966,000 cases.

Coho—Down to 129,000 cases, well under the year before—197,000 cases—and the 202,000-case average.

King — With 55,000 cases, this species was close to both the before and the average.

Value Drop Is $15

Value of the Alaska canned salmon pack shrank to $61,000,000 in 1953, down some $15,000,000 from the year before, a condition caused by the lower prices as well as the lower volume.

This failure of prices to run counter-current to falling volume was one of the factors which made the results of the 1953 season so serious. Another contributing factor to the economic debacle was high cost of fish. While it is true that the packers had succeeded in securing somewhat more favorable terms from the unions in 1953, these had to do essentially with the plant workers. The prices of fish are not believed to have been reduced in 1953.

High cost, low volume, lower prices — that sums-up the season.

Southeast Alaska Canned Salmon Pack by Subdivisions

EASTERN DISTRICT (Cases)						YEAR	WRANGELL DISTRICT (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
16,687	284,097	135,981	14,698	5,016	456,479	1936	25,405	326,866	93,544	27,726	1,085	474,626
8,923	323,556	65,931	6,904	8,257	413,571	1937	22,067	383,115	61,189	22,378	1,959	490,708
14,244	260,145	58,041	13,245	4,794	350,469	1938	18,492	217,161	59,652	20,433	86	315,824
11,730	217,432	53,199	7,179	317	289,857	1939	17,137	318,808	40,525	12,712	18	389,200
7,332	224,495	76,621	9,588	261	318,297	1940	21,306	165,783	73,544	32,040	26	292,699
9,079	601,161	64,880	9,210	113	684,443	1941	28,709	633,163	33,587	35,343	10	730,812
8,139	254,772	74,580	12,108	271	349,870	1942	22,212	167,742	67,652	42,730	895	301,231
7,192	93,048	110,912	5,452	799	217,403	1943	11,618½	120,730	80,696	17,431½	68	230,544
10,905	116,501	109,884	5,384	426	243,100	1944	16,065	59,256	66,069	9,024	17	150,431
10,168	94,505	29,267	4,010	207	138,157	1945	17,600	118,531	17,603	15,571	101	169,406
6,082	29,636	21,480	4,622	122	61,942	1946	6,417	66,258	16,017	18,894	173	107,759
5,342	38,272	28,935	3,960	510	77,019	1947	6,226	99,343	23,870	11,315	2,308	143,062
4,240	13,308	15,378	12,542	1,736	47,204	1948	7,260	53,860	55,460	22,799	2,971	142,350
92	43,944	6,055	8,661		58,752	1949	9,573	312,318	22,417	17,176	563	362,047
5,015	13,028	32,096	3,096	183	53,418	1950	7,190	36,846	44,815	30,849	55	119,755
1,146	74,522	68,391	20,777	168	165,004	1951	16,405	189,750	88,994	81,353	315	376,817
1,986	51,015	41,246	6,468	2	100,717	1952	13,445	78,552	80,763	30,359	1,413	204,532
8,713	12,333	25,930	3,905	6	50,887	1953	19,281	40,718	84,904	22,356	645	167,904
5,369	48,706	37,866	7,343	285	99,620	Aver.	11,946	105,543	50,091	25,970	856	194,406

SOUTH PRINCE OF WALES ISLAND DISTRICT (Cases)					YEAR	SOUTHERN DISTRICT (Cases)					REGIONAL GRAND TOTAL
Reds	Pinks	Chums	Cohoes	TOTAL		Reds	Pinks	Chums	Cohoes	TOTAL	
25,716	620,300	104,038	33,170	783,224	1936	60,217	1,222,241	192,641	32,834	1,507,933	4,067,717
23,545	345,068	65,613	33,908	468,134	1937	36,031	671,257	165,508	17,098	889,894	2,933,896
20,395	329,083	81,737	39,708	470,923	1938	44,399	749,432	162,473	27,346	983,650	2,713,948
22,107	207,989	45,249	11,648	286,902	1939	46,699	549,500	80,549	16,427	693,175	2,035,497
11,283	251,718	58,655	19,001	340,657	1940	36,652	503,005	98,092	35,881	673,630	2,226,770
11,548	584,582	55,624	33,178	684,932	1941	42,980	1,012,240	89,384	38,846	1,183,450	4,294,333
12,091	337,418	96,628	36,901	483,038	1942	37,713	533,057	181,262	28,308	780,340	2,648,707
5,656	162,482	75,217	15,780	259,135	1943	23,660	473,156	165,752	29,537	692,105	1,892,868
7,790	144,209	94,371	18,816	265,186	1944	38,465	349,073	132,735	29,482	549,755	1,972,552
11,217	225,606	43,240	26,274	306,337	1945	33,735	418,327	77,829	30,873	560,764	1,549,543
6,141	203,887	67,452	17,340	294,820	1946	16,994	582,377	101,901	35,336	736,608	1,476,326
4,626	110,324	42,141	12,150	169,241	1947	9,279	308,929	88,107	22,248	428,563	1,072,211
2,886	163,397	64,240	26,125	256,648	1948	9,661	388,325	192,232	39,446	629,644	1,296,451
3,014	406,385	41,200	17,701	468,300	1949	8,561	909,596	100,512	41,364	1,060,033	2,512,951
2,591	182,381	83,659	16,199	284,830	1950	6,231	273,449	247,876	28,779	556,335	2,383,253
4,686	127,347	44,407	27,598	204,038	1951	13,438	592,425	124,633	38,474	768,970	1,964,214
10,952	103,694	28,715	15,632	158,993	1952	17,775	241,256	250,056	25,748	534,835	1,289,325
17,320	102,733	24,824	14,651	159,590	1953	32,916	150,693	139,136	21,886	344,631	977,482
7,122	177,000	53,425	19,249	256,798	Aver.	18,706	421,445	145,502	31,364	617,014	1,649,431

NOTE: — Small quantities of Kings have been included with Cohoes in the last two districts listed. Final data for Southeast Alaska has not been reported by subdivisions since 1949. Figures are based on U. S. Fish and Wildlife Service final data, which DO NOT include fish caught in these areas and canned elsewhere, and accordingly are somewhat different from those in other tables compiled independently by Pacific Fisherman. Figures for the latest year shown are preliminary. "Average" figures are for the last ten years

Pacific Canned Salmon Packs and Values

Packs reduced to basis of full cases of 48 lbs. net. Values calculated from best data available.

Year	Alaska		Washington		Oregon		California		U. S. Total		British Columbia		Grand Total	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value
		$		$		$		$		$		$		$
1939	5,239,211	35,110,571	478,246	3,944,000	251,070	3,640,898	...	...	5,971,527	42,695,469	1,539,070	10,449,945	7,510,597	53,145,414
1940	5,028,378	31,828,451	222,808	2,825,000	297,716	4,129,220	...	...	5,548,902	38,782,681	1,467,227	11,427,923	7,016,129	50,209,908
1941	6,906,503	57,466,702	491,311	6,162,000	399,840	5,925,444	1,125	13,500	7,798,779	69,567,646	2,248,870	18,406,545	10,047,649	87,974,191
1942	5,089,109	48,677,509	366,065	6,909,000	397,331	6,890,162	...	...	5,852,515	62,476,671	1,811,560	20,050,238	7,664,075	82,526,909
1943	5,396,509	58,579,194	149,175	2,309,000	130,707	2,857,246	767	16,000	5,677,158	63,761,440	1,258,221	11,673,469	6,935,379	75,434,909
1944	4,877,796	51,606,544	81,490	1,774,000	159,783	3,445,244	864	17,660	5,119,943	56,843,448	1,097,558	11,479,093	6,217,521	68,322,541
1945	4,338,692	44,528,964	414,258	4,845,000	155,292	3,287,812	2,755	38,000	4,913,335	52,699,776	1,739,311	18,409,962	6,652,646	71,109,738
1946	3,971,109	58,667,561	385,437	13,020,000	206,563	7,165,645	5,034	153,000	4,568,149	79,006,206	1,348,138	17,532,462	5,916,287	96,538,668
1947	4,302,466	91,297,885	957,429	21,420,000	338,852	11,133,690	13,917	513,000	5,612,664	124,364,575	1,505,157	24,900,000	7,117,379	149,264,575
1948	4,014,891	96,528,730	484,102	12,685,858	314,556	10,956,513	11,417	366,095	4,824,966	120,537,196	1,308,137	26,579,000	6,133,103	147,116,196
1949	4,391,591	81,263,168	973,740	17,481,282	158,472	4,665,290	1,113	21,240	5,524,916	103,430,980	1,436,464	27,654,489	6,961,380	131,085,469
1950	3,272,643	81,403,511	670,341	18,285,000	176,063	6,193,000	...	...	4,119,047	105,881,511	1,482,560½	30,155,177	5,602,056½	138,885,502
1951	3,631,918	84,649,330	906,252	21,357,974	175,091	6,631,198	...	...	4,713,261	112,638,502	1,955,475	46,261,080	6,668,736	158,899,582
1952	3,574,191	76,357,016	749,591	17,122,352	140,565	4,784,421	703	20,292	4,455,022	99,636,808	1,293,435	27,751,435	5,741,490	127,388,243
1953	2,925,570	60,987,334	847,501	18,680,750	126,832	4,007,352	436	15,425	3,900,339	83,690,861	1,821,269	350,060,600	5,721,608	118,751,461

"THE HOUSE OF FRIENDLY SERVICE"

NORDBY
SUPPLY COMPANY

Nordby Supplies Every Marine Need

PAULS Locknot Nylon Netting
WALL Rope—TUBBS Cordage
JABSCO Pumps
GOODRICH Rubber Boots
SKIL-TOOLS
PROTO Machinist Tools

PAULS Purse & Trap Netting
PETTIT Marine Paints
Pipe Fittings & Valves
SPONGEX Floats
DURA-NETT Net Preservative
Cedar Sealed Floats

Whatever You Need--When and Where You Want It!

Complete facilities for hanging and treatment of all types of netting
Complete rigging and canvas loft

1300 WESTERN AVE., EL. 1364
SEATTLE 1, WASHINGTON

WATER STREET
KETCHIKAN, ALASKA

The
PUCKETT CO.

Main Office
Pier 24, South
EL 4141
Seattle 4, Washington

•

LABELING
STRAPPING
OVERHAULING
CANNED GOODS

We are old enough to be good . . .
young enough to try

•

The Puckett Company

Owners of
JACK HORNER CO.
Pier 25, MA 0745
Seattle 4, Washington

METAL ITEMS
for the
FISHING INDUSTRY

TANKS
CONVEYORS
CYCLONES
BARGES
CHUTES
STACKS
SLIMING TABLES
ELEVATORS

MILD and STAINLESS STEEL - Monel
Capacity 26 ga. to ½" plate

•

FLOHR & CO.
METAL FABRICATORS

Telephone: EVergreen 2222 3920 6th Ave. N.W.
SEATTLE 7, WASHINGTON

SATISFACTORY salmon canning conditions prevailed on Puget Sound in 1953, particularly when contrasted with the situation in Alaska. The results on the Sound reflected that region's kinship with the coast of British Columbia, and the evident success attending the efforts of the Washington state fisheries authorities to rebuild the run in the face of the heavy sport fishery, plus vigorous and increasingly effective commercial operations.

With 22 canneries operating, the Sound pack totalled 809,000 full cases, with a market value figured at $17,161,000.

As 1953 was an odd-numbered year, Pinks of course led the production with 447,000 cases, slightly more than in 1951, the cycle year. It will be remember that 10 years before, in 1943, the odd-year Pink run failed for the first time, yielding only 62,000 cases. In the five odd-years which have occurred since that failure, the average Pink pack has been 478,000 cases, which is a fair measure of the success which has attended the program for rebuilding of the Pink salmon resource.

Sockeyes Highlight Season

Highlight of the 1953 season on Puget Sound was the pack of 167,000 full cases of Sockeyes—the best pack of the cycle for many years. This catch reflected the remarkable strides —discussed more fully elsewhere in this issue—which have been made in rebuilding the Sockeye salmon resource of the Fraser River system.

Chum salmon was the principal source of weakness in the Puget Sound pack of 1953, the pack of 124,000 cases being much less than half that of the year before. The figure likewise was substantially short of the 10-year average of 175,000 cases.

Canning Imports Decline

Cohoes understandably were short of the pack for 1952, which was the biggest on the Sound since 1919. Moreover, the 66,657 cases of this grade canned in 1953 were closely in line with the 67,705-case average of the past decade.

The Chum and Coho salmon runs to Puget Sound in 1953 both were light, and both followed a year in which these species had yielded very heavily.

Quantity of salmon imported fresh or frozen from British Columbia for canning on Puget Sound appears to have been lighter in 1953 than for a number of years previous. This was due in part to economic considerations, including the very active demand for Chums and Silver by the freezers; and also in some substantial degree to reduced availability in Southern British Columbia.

1953-PUGET SOUND CANNED SALMON PACK-1953

	COMPANY	CANNERY LOCATION	SOCKEYE			PINK			CHUM			COHO OR SILVER			KING or CHINOOK			GRAND TOTAL (Full Cases)	
			1-lb Talls & 4-lb. Flats	½ & ¼-lb Flats (48 lb. net)	Total	1-lb Talls & 4-lb. Flats	½ & ¼-lb Flats (48 lb net)	Total	1-lb Talls & 4-lb. Flats	½ & ¼-lb Flats (48 lb net)	Total	1-lb Talls & 4-lb. Flats	½ & ¼-lb Flats (48 lb. net)	Total	1 lb/Talls & 4/Flats	½ & ¼-lb. Flats (48 lbs.)	TOTAL		
1	Alaska Packers Assn.	Semiahmoo	...	10,016	10,016	47,229	1,163	48,392	114	..	114	4,154	26	4,180	...	..	..	62,702	1
2	American Packing Co.	Anacortes	..	9,729	9,729	24,581	2,609	27,190	25	3	28	576	80	656	...	...	...	37,603	2
3	Anacortes Canning Co.	Anacortes	6	5,114	5,120	(1)13,837	87	13,924	(1) 131	1	132	(1) 486	...	486	11	(11)59	70	19,732	3
4	Burk Canning Co.	Bellingham	30	(12) 9,462	9,492	(2) 19,950	3,135	23,085	(2)3,492	14	3,506	(2)1,099	1,440	2,539	...	6	6	38,628	4
5	Columbia River Packers Assn	Bellingham	...	(13)21,259	21,259	24,933	4,970	29,903	159	4	163	...	1,993	1,993	...	156	156	53,474	5
6	Dressel-Collins Fish Co.	Seattle	...	3,030	3,030	524	19,452	19,976	1,120	155	1,275	...	662	662	...	...	..	24,943	6
7	S. Einstoss	Anacortes, etc.	...	6,135	6,135	6,961	50	7,011	...	...	...	...	50	50	...	...	...	13,196	7
8	Everett Fish Co.	Everett	...	..	...	(3) 2,530	...	2,530	(3) 2,275	(14) 51	2,326	336	(14) 751	1,087	...	...	...	(26)5,943	8
9	Farwest Fishermen, Inc.	Anacortes	15	(15)20,722	20,737	32,239	10,246	42,485	780	3	783	(21)1,385	(15) 1,612	2,997	10	745	755	67,757	9
10	Fishermen's Packing Corp.	Anacortes	1	(16)23,846	23,847	(25)57,389	20,129	77,518	1,533	1,883	3,416	(25)1,747	(16) 6,741	8,488	307	806	1,113	114,382	10
11	Food Specialty Co.	Seattle	...	..	..	...	...	..	7,100	...	7,100	(5) 7,500	1,400	8,900	...	...	...	16,000	11
12	Friday Harbor Canning Co.	Friday Harbor	..	(17) 4,324	4,324	(4) 8,707	3,256	11,963	(4) 23	21	44	(4) 34	(17) 594	628	(4) 29	(17)44	73	(27) 17,032	12
13	Haines Oyster Co.	Seattle	...	..	...	...	...	...	2,000	...	2,000	(5) 1,000	...	1,000	...	..	...	3,000	13
14	Iwersen Canning Co.	Point Roberts	...	74	74	...	...	...	...	24	24	...	...	...	...	5	5	103	14
15	John C. Jackson, Inc.	Friday Harbor	...	(18) 5,564	5,564	2,387	10,623	13,010	201	133	334	60	(18) 1,078	1,138	...	107	107	20,153	15
16	Marine Fisheries, Inc.	Floating*	1	...	1	365	..	365	...	...	...	9	...	9	...	...	...	375	16
17	Nelbro Packing Co.	Point Roberts	..	...	...	...	...	...	30,634	...	30,634	157	...	157	...	...	...	30,791	17
18	New England Fish Co.	Everett	2,595	3,090	5,685	21,463	3,900	25,363	1,242	167	1,409	(6) 8,185	1,643	9,828	140	44	184	42,469	18
19	Pacific American Fisheries, Inc.	Bellingham		2,961	2,961	1,919	1,452	3,371	(7) 5,874	.	5,874	...	173	173	...	19	19	12,398	19
20	Perfection Smokery	Seattle	...	...	...	...	...	..	...	...	...	...	(22) 625	625	...	...	...	625	20
21	San Juan Fishing & Packing Co.	Various	...	1,299	1,299	(8) 3,745	1,736	5,481	(8) 314	...	314	(8) 328	27	355	...	...	...	7,449	21
22	Sea-Pac Company, Inc.	Bellingham	...	210	210	117	59	176	5,781	...	5,781	...	...	...	...	...	...	6,167	22
23	Sebastian-Stuart Fish Co.	Anacortes	5	(28)10,425	10,430	(29)19,344	25	19,369	(29) 162	4	166	(29) 1,516	20	1,536	12	(28)87	99	31,600	23
24	Washington Fish & Oyster Co.	Seattle	2	9,772	9,774	29,097	6,741	35,838	20,597	7,516	28,113	3,404	5,495	8,899	314	...	314	82,938	24
25	Whiz Fish Products Co.	La Conner	29	17,455	17,484	(9)35,092	3,605	38,697	(9) 21,954	487	22,441	(9) 1,846	695	2,541	...	...	..	81,163	25
	Miscellaneous (Estimated)		100	551	651	1,626	121	1,747	8,325	.	8,325	(5) 7,600	130	7,730	...	900	900	19,353	–
	TOTAL		2,784	165,038	167,822	354,035	93,359	447,394	113,836	10,466	124,302	41,422	25,235	66,657	823	2,978	3,801	809,976	

NOTE:– As far as possible, Alaska fish canned on Puget Sound are OMITTED from this table and tabulated with the Alaska packs, though some small quantities of Alaska fish may be included here Alaska salmon canned on Puget Sound but tabulated elsewhere amount in all to about 73,317 full cases, including: from Bristol Bay, 52,095 Reds, 1,576 Chums and 11 Kings; Central Alaska, 10,971 Pinks and 883 Chums: Southeast Alaska, 41 Reds, 223 Pinks, 7,475 Chums and 42 Cohoes.

Packs of fish from British Columbia are included in this table, with no attempt to segregate them; most of the chums and a substantial part of the cohoes being from that source. Part or all of a number of the packs listed was made through joint operations, or custom-canned, in plants of other companies. Such operations were too complex to be shown here in detail.

FOUR-POUND cans are included with 1-lb. Talls, as follows: (1) 600 cases Pinks, 17 Chums and 355 Cohoes. (2) 799 Pinks, 11 Chums, 571 Cohoes. (3) 1,215 Pinks and 553 Chums (4) 1,056 Pinks, 22 Chums, 20 Cohoes, 1 King. (5) All 4-lbs. (6) 862 Cohoes (canned in Everett Fish Co. plant). (7) 5,867 Chums, of which 5,291 were B.C. (8) 242 Pinks, 314 Chums, 228 Cohoes. (9) 2,842 Pinks, 2,181 Chums, 1,155 Cohoes (29) 3,262 Pinks, 11 Chums, 1,193 Cohoes.

QUARTER-POUND cans (basis of 48 lbs. net) are included with Halves, as follows: (11) 50 cases Kings. (12) 95 Sockeyes (13) 2,107½ Sockeyes. (14) 51 Chums and 751 Cohoes. (15) 791 Sockeyes and 1,297 Cohoes (16) 3,690 Sockeyes and 2,897 Cohoes. (17) 713 Sockeyes, 366 Cohoes and 6½ Kings. (18) 33 Sockeyes and 141 Cohoes. (28) 759 Sockeyes and 72 Kings

POUND FLATS are included with Talls, as follows: (21) 1,385 cases Cohoes. (22) Includes about 250 full cases Halves custom-canned for sportsmen. (26) Includes some custom-canned for others, not otherwise tabulated. (27) Friday Harbor Canning Co 's pack includes with Halves the equivalent of 211 full cases of Sockeyes in 7-oz glass, skin and backbone removed. * New operation.

●

THE CANADIAN FISHING CO. LTD.

Vancouver, B.C.

AFFILIATED WITH NEW ENGLAND FISH CO., SEATTLE, WASH.
"CANFISCO'S" WORLD FAMOUS PRODUCTS INCLUDE

"GOLD SEAL" FINEST SOCKEYE SALMON and "GOLD SEAL" TUNA

●

NATIONAL FOOD BROKERS ASSOCIATION

JONES, WEISMANN & CO., INC.

177 STATE STREET
BOSTON 9, MASS.

Specializing in canned fish sales
in all New England areas

U. K. BROKERS

SIDWELL & CO., Ltd.

24, LOVAT LANE
BILLINGSGATE, LONDON, E. C. 3

SALMON

Canned, Mild Cured, Frozen

Cable: SAMON SALES

K. J. PREISWERCK LTD.

VANCOUVER, B. C., CANADA

CABLES: PREISCO TELEPHONES: MARINE 1285-6

Direct exporters and assemblers of canned salmon, sardines and herring under own or buyers labels

Experienced Sampling Service Free

SALMON

FREEZERSHIP operations in Alaska waters in 1953 accounted for 73,317 cases of the Territory's pack of canned salmon — most of it of course in the Bristol Bay area.

Shortage of Red salmon on Bristol Bay, however, put a premium on freezership operations elsewhere, with a resultant substantial increase in the volume of fish frozen in Central Alaska for canning.

The Western Alaska freezership pack was 53,682 cases, with 52,095 cases of the total Red salmon, 1,576 Chums and 11 Kings.

Freezership operations in Central Alaska produced no Reds, but got-up 10,971 cases of Pinks and 883 cases of Reds for a regional freezership total of 11,854 cases.

Chums were the chief items in Southeast Alaska — due to a trip north for this purpose during the fall season. Out of the 7,781 cases gotten from Southeast Alaska by freezerships, Chums accounted for 7,475 cases, Reds for 41, Pinks for 223 and Cohoes for 42.

Japanese freezing and salting operations, conducted in the mid-Pacific in the vicinity of the 175th meridian o nsalmon supplied by fleets of ocean gillnetters, were varied in 1953 to include a limited canning operation.

Doubling of the Japanese operations is authorized for 1954.

Effect of this freezership-cannery operation is uncertain.

Americans feel it may have had an adverse effect in Alaska.

PUGET SOUND CANNED SALMON PACK

Puget Sound salmon canning commenced in 1877 with a pack of 5,500 cases, but no segregation by species is available prior to 1889. From the beginning production increased, with much fluctuation, to 22,000 cases in 1887; the average for intervening years being 7,867 cases. Values shown are based on opening prices. "Average" figures at bottom of table are for last ten years.

YEAR	# of Plants Oper.	Sockeye		Pink		Chum		Coho		Chinook		TOTAL		YEAR
		Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	
1888	4	...	...	...	...	...	...	...	...	...	...	21,975	$126,356	1888
1889	2	....	...	2,809	$7,584	1,145	$3,435	7,480	$37,400	240	$1,200	11,674	49,619	1889
1890	1	...	...	...	...	4,000	12,000	3,000	15,000	1,000	5,000	8,000	32,000	1890
1891	2	5,538	$24,921	5,647	15,246	3,093	10,825	5,869	19,368	382	2,101	20,529	72,461	1891
1892	2	2,954	11,816	...	...	16,180	56,630	7,206	24,500	86	473	26,426	93,419	1892
1893	3	47,852	103,371	17,530	47,331	11,380	31,295	11,812	59,060	1,200	6,480	89,331	247,537	1893
1894	3	41,781	188,014	9,049	24,432	22,152	60,918	22,418	89,672	...	...	95,400	363,036	1894
1895	7	65,143	273,108	23,633	62,556	38,785	94,741	50,865	154,218	1,542	7,325	179,968	591,948	1895
1896	11	72,979	350,299	...	...	26,550	73,013	82,640	264,448	13,495	67,475	195,664	755,235	1896
1897	12	312,048	1,248,192	57,268	171,804	23,310	64,103	91,900	282,133	9,500	39,045	494,026	1,805,277	1897
1898	18	252,000	1,058,400	...	...	38,400	105,600	98,600	335,240	11,200	50,624	400,200	1,549,864	1898
1899	19	499,646	2,368,334	252,733	734,241	31,481	86,427	111,387	418,176	24,364	103,180	919,611	3,170,358	1899
1900	19	228,704	1,149,000	...	...	89,100	245,025	128,200	512,800	22,350	134,100	469,450	1,940,925	1900
1901	...	1,105,096	....	275,494	...	...	...	...	...	...	...	1,380,590	...	1901
1902	21	339,556	2,047,655	...	...	93,492	467,460	85,817	429,085	30,049	150,245	548,914	3,094,445	1902
1903	22	167,211	1,003,260	181,236	407,984	12,001	30,002	103,450	413,800	14,500	72,500	478,398	1,929,546	1903
1904	13	123,419	653,871	...	...	49,656	124,254	118,127	447,851	14,441	69,352	305,643	1,295,328	1904
1905	24	847,122	4,952,718	70,992	212,976	41,057	102,643	79,335	337,174	1,804	9,922	1,040,310	5,615,433	1905
1906	16	182,241	1,251,236	...	...	149,218	708,781	94,497	472,485	8,139	48,834	430,602	2,481,336	1906
1907	14	93,122	698,416	433,423	1,300,269	50,249	150,847	119,472	476,288	1,814	16,326	698,080	2,642,146	1907
1908	22	170,951	1,196,657	6,075	18,225	47,607	142,821	128,922	644,922	95,210	664,470	448,765	2,669,095	1908
1909	11	1,097,904	6,183,300	370,993	902,342	53,688	128,916	143,133	630,446	13,019	72,604	1,632,949	7,917,608	1909
1910	24	248,014	1,673,095	108	388	146,942	514,297	162,755	895,153	10,064	60,324	567,883	3,143,256	1910
1911	15	127,761	1,168,145	1,046,992	4,302,344	104,321	392,122	256,124	1,591,185	21,823	172,582	1,557,021	7,727,524	1911
1912	20	184,680	1,660,173	700	2,185	60,760	154,193	149,727	761,200	20,252	101,706	416,125	2,679,457	1912
1913	22	1,673,099	10,871,178	791,886	2,092,401	56,225	124,970	61,019	235,372	1,234	5,247	2,583,463	13,329,168	1913
1914	31	335,230	3,208,969	892	4,212	278,801	955,920	151,893	759,689	26,044	167,322	792,860	5,095,839	1914
1915	41	64,584	676,769	583,649	1,795,285	411,724	155,744	180,783	902,335	28,466	145,555	1,269,206	4,675,418	1915
1916	32	84,637	699,161	1,887	8,264	427,878	1,492,161	155,832	957,650	37,030	280,708	707,278	3,437,944	1916
1917	45	411,538	5,366,218	1,124,884	7,823,960	216,285	1,362,634	114,276	1,065,983	57,543	540,904	1,921,554	16,159,699	1917
1918	32	50,723	781,992	6,605	53,336	267,538	1,715,159	235,860	2,532,553	63,472	754,637	624,198	5,837,677	1918
1919	35	64,346	1,186,413	421,215	3,854,113	525,541	1,687,787	210,883	2,618,504	73,618	910,968	1,295,626	12,257,785	1919
1920	11	62,654	1,725,252	4,669	28,860	48,849	3,225,368	24,502	221,688	25,846	370,215	166,520	2,571,385	1920
1921	23	102,967	1,991,368	404,713	1,870,385	30,831	123,608	89,412	798,541	25,567	199,609	653,490	4,983,511	1921
1922	16	48,566	945,178	2,225	13,273	65,552	283,395	111,771	744,656	20,615	222,641	248,729	2,209,143	1922
1923	18	47,402	860,000	475,849	2,429,800	97,081	471,790	122,000	785,000	15,806	150,407	758,138	4,696,997	1923
1924	12	69,369	1,182,358	5,945	39,192	134,360	651,014	87,879	688,950	20,096	216,043	317,649	2,777,557	1924
1925	23	112,023	2,098,683	553,904	3,179,302	43,345	207,546	173,215	1,902,289	29,183	432,349	911,670	7,820,169	1925
1926	14	44,673	532,408	2,107	15,095	112,204	573,411	123,469	1,163,286	27,972	365,826	310,425	2,650,026	1926
1927	21	97,594	2,115,410	578,923	3,669,941	38,129	225,654	135,802	1,358,020	41,796	588,314	892,244	7,957,339	1927
1928	14	60,081	1,207,981	5,597	41,091	146,356	833,114	89,923	777,472	23,419	294,816	325,376	3,154,024	1928
1929	22	111,898	2,203,496	727,621	4,639,076	156,683	911,584	101,635	1,044,372	34,007	439,778	1,131,844	9,238,306	1929
1930	12	352,194	4,890,921	3,712	18,486	64,234	237,123	122,691	1,240,876	29,775	407,912	572,606	6,795,318	1930
1931	18	83,728	1,316,348	705,580	2,486,377	55,189	177,000	76,025	569,699	28,359	293,022	948,881	4,842,446	1931
1932	10	78,319	897,006	1,677	5,779	146,151	381,116	60,740	330,385	24,024	168,625	310,911	1,782,912	1932
1933	19	125,738	1,340,000	543,340	2,643,528	37,039	171,742	44,568	292,684	21,091	221,776	771,776	4,669,910	1933
1934	21	340,787	3,632,587	3,296	17,331	72,841	251,991	69,080	517,901	14,089	74,024	500,093	4,493,834	1934
1935	14	51,714	720,076	369,620	1,652,161	15,636	68,402	70,514	534,956	9,243	91,396	516,727	3,066,991	1935
1936	9	60,063	813,510	1,152	7,598	86,070	315,465	30,568	292,528	4,708	43,427	182,561	1,472,528	1936
1937	13	56,983	925,160	327,973	1,676,692	18,759	91,696	31,747	323,976	6,412	76,750	441,874	3,094,274	1937
1938	13	139,152	1,824,396	455	2,641	7,697	32,193	10,268	100,753	2,371	36,800	159,943	1,996,783	1938
1939	14	43,561	669,202	282,271	1,574,317	15,080	76,786	54,905	485,760	2,446	33,508	398,263	2,839,573	1939
1940	9	62,748	1,122,684	2,947	17,432	23,405	114,798	30,654	231,878	1,674	15,734	121,428	1,502,526	1940
1941	9	110,758	2,140,457	153,924	1,203,657	25,423	187,224	46,213	553,230	4,769	62,354	341,087	4,146,922	1941
1942	10	258,488	5,255,888	851	7,965	2,223	17,748	6,862	97,693	1,204	26,389	269,628	5,405,683	1942
1943	10	19,149	424,339	62,129	637,730	243	2,432	26,292	390,847	2,864	12,456	110,677	1,467,804	1943
1944	3	37,214	830,719	299	3,313	...	...	373	5,883	1,064	21,240	38,950	861,155	1944
1945	6	53,532	1,176,467	305,245	2,724,176	1,184	12,467	18,802	258,076	3,639	63,511	382,402	4,234,697	1945
1946	20	271,311	10,108,350	91	2,184	47,099	989,079	7,118	163,714	6,841	268,120	332,460	11,531,447	1946
1947	25	7,516	315,956	639,426	13,423,416	139,131	2,532,194	79,450	2,254,404	29,143	875,098	894,666	19,401,068	1947
1948	22	91,268	5,005,792	4,645	128,328	245,133	5,558,820	70,659	2,049,606	27,043	903,578	438,748	13,646,124	1948
1949	23	94,627	2,959,425	557,740	9,305,100	162,532	2,381,000	55,910	1,273,000	8,594	224,000	879,403	16,142,525	1949
1950	20	128,385	4,984,208	2,277	61,855	512,997	10,752,172	116,655	3,454,279	8,215	191,712	768,529	19,444,226	1950
1951	25	156,461	5,815,837	441,605	9,419,295	233,468	3,922,457	88,511	2,200,801	11,275	281,794	931,320	21,640,184	1951
1952	20	114,707	5,153,778	817	51,026	292,318	5,147,662	172,910	4,079,424	7,869	178,654	588,621	14,610,544	1952
1953	22	167,822	6,041,592	447,394	8,239,810	124,302	1,761,160	66,657	1,012,224	3,801	106,937	809,976	17,161,723	1953
Aver.	19	112,284	4,239,212	239,884	4,335,920	175,816	3,305,701	67,705	1,675,141	10,748	311,464	606,508	13,867,369	Aver.

NOTE:– Figures for the last year in this table are from "Pacific Fisherman's" compilation. Those for previous years have been revised from official data.

CANNED SALMON PACK OF ALASKA FREEZERSHIPS

(Salmon Frozen in Alaska and Canned Elsewhere— Does not Include Salmon Canned Anywhere in Alaska)*

Year	From Western Alaska (cases)				From Central Alaska (cases)			From Southeast Alaska (cases)				Grand Total Full Cases (48 lbs)	Year
	Red	Chum	Other Species	Total	Pink	Other Species	Total	Pink	Chum	Other Species	Total		
1948**	4,031	535	2,000	(b) 6,566	...	...	...	...	...	...	...	6,566	1948**
1949**	10,976	(a) 750	2,536	14,262	...	...	...	...	...	...	...	14,262	1949**
1950	12,544	2,905	...	15,449	...	...	...	1,335	597	34	1,966	17,415	1950
1951	44,368	1,665	3,814	49,847	805	150	955	1,652	4,257	202	6,111	56,913	1951
1952	100,350	2,397	1,071	103,818	2,909	...	2,909	4	7,179	462	7,645	114,372	1952
1953	51,133	1,576	11	52,720	10,971	883	11,854	223	7,475	83	7,781	72,355	1953

**Data prior to 1950 cannot be accurately segregated. Some fish were frozen in Central Alaska and Southeastern Alaska in the years 1948 and 1949, but data available are not felt to be sufficiently accurate for inclusion in this table. Accordingly, reports for these two years are concerned with Bristol Bay only.

*Some discrepancy arises from the fact that other tables, for current years, include some fish in other parts of Alaska than the areas where caught.

(a) Estimated. (b) "Reefer King" pack only.

CALL ON PIONEER FOR NEXT SEASON'S REPAIR AND BUILDING SUPPLIES

One order... one call... one supplier... PIONEER can take care of *all* your needs. Pioneer can deliver maintenance and construction materials needed to put your cannery, fishing fleet, or other business in first-class condition, now!

Pioneer's large stocks of materials ready for immediate shipment include: exterior and interior paints of all kinds, AAA marine coatings, marine black, boot topping, anti-fouling paint, marine varnishes, concrete mixes, gravel, sand, refractories, roofing, wall board, insulation, and Albi-R fire-preventing paint.

For over 20 years, Pioneer has been supplying needs of Alaska fishing and construction trades. For quick service on maintenance, repair and construction problems, call on PIONEER!

PIONEER SAND AND GRAVEL CO.
901 FAIRVIEW N. • SEATTLE 11 • MA 2900

Landings of Fish on the Oregon Side of the Columbia River

October 1952 – September 1953

MONTH	SALMON					STURGEON		SMELT	SHAD	TOTAL Poundage
	Chinook	Steelhead	Blueback	Silver	Chum	White	Green			
October 1952	152,846	47.581	...	397,179	64,076	20,183	2,481	,..	40	684,386
November	5.450	46.318	...	240,375	133,721	4,414	287	...	4	430,569
December	...	3.033	...	830	93	132	1,192	...	...	5,280
January 1953	1.926	5,918	...	20	...	826	65	165,653	...	174,408
February	274,488	162.134	...	31	12	27,425	124	66,745	...	530,959
March	39.502	4,896	...	...	...	627	110	...	...	45,135
April	276,650	20	...	...	...	1,103	100	...	18	277,891
May	865,192	17,302	...	6	...	60,123	838	...	33,232	976,693
June	281,024	142,531	44,028	21,030	...	8,239	952	...	75,044	572,848
July	312,962	451,340	35,016	116,857	...	18,215	4,827	...	3,493	942,710
August	1,833,987	270,799	4	136,361	4,502	32,240	16,337	...	...	2,294,230
September	905,429	274,821	...	162,997	46	21,154	2,916	...	...	1,367,363
Totals	4,949,456	1,426,693	79.048	1,075,686	202,450	194,681	30,229	232,398	111,831	8,302,472

CANNED SALMON PACK OF COASTAL AREAS

Year	WASHINGTON					OREGON				California	GRAND TOTAL Full Cases	Year
	Blueback	Chinook	Silver & Steelhead	Chum & Pink	Total Full Cases	Chinook	Silver & Steelhead	Chum	Total Full Cases	TOTAL (Full Cases)		
1919	1,244	5,029	17,174	39,995	63,442	26,089	43,114	7,081	76,284	22,766	162,492	1919
1920	235	921	405	26	1,587	30,571	4,490	. . .	35,061	21,055	57,703	1920
1921	2,590	2,010	4,897	5,281	14,778	15,632	122	. . .	15,754	10,376	40,908	1921
1922	26,491	2,573	13,354	10,939	53,357	12,270	11,769	2,248	26,287	9,700	89,344	1922
1923	10,454	1,794	5,172	38,523	55,943	10,526	22,606	14,279	47,411	6,000	109,354	1923
1924	6,778	1,506	5,493	32,760	46,537	16,351	30,449	14,603	61,403	12,936	120,876	1924
1925	4,821	3,810	6,679	35,342	53,276	22,404	18,872	14,410	55,686	22,339	131,301	1925
1926	2,720	2,441	3,182	17,377	25,720	19,130	7,033	4,838	31,001	11,537	68,258	1926
1927	5,260	4,195	1,983	25,452	36,890	17,456	13,390	181	48,619	15,585	101,094	1927
1928	2,000	52	415	34,109	37,031	5,411	8,136	5,500	19,047	4,237	60,515	1928
1929	4,449	213	1,158	35,699	41,519	4,700	2,313	8,047	15,060	2,774	59,353	1929
1930	21,536	49	2,160	11,846	35,519	11,252	981	. . .	12,233	5,171	52,995	1930
1931	8,476	61	501	11,225	20,263	4,234	. . .	8,600	12,834	12,280	45,377	1931
1932	14,263	308	1,152	22,236	37,959	8,524	. . .	. . .	8,524	780	47,263	1932
1933	6,754	845	424	7,735	15,758	7,150	. . .	500	7,650	2,149	25,557	1933
1934	3,323	2,344	1,453	15,370	22,490	4,100	. . .	2,000	6,100	820	29,410	1934
1935	6,217	3,685	10,009	7,351	27,262	2,500	. . .	2,400	4,900	874	33,036	1935
1936	705	1,137	1,883	16,038	19,763	. . .	. . .	9,500	9,500	. . .	29,263	1936
1937	2,865	176	82	7,932	11,055	2,400	. . .	. . .	2,400	147	13,602	1937
1938	1,559	. . .	. . .	13,173	14,732	. . .	. . .	. . .	. . .	. . .	14,732	1938
1939	. . .	. . .	. . .	6,381	6,381	. . .	. . .	2,200	2,200	. . .	8,581	1939
1940	138	23	504	9,142	9,807	647	643	1,000	2,290	. . .	12,097	1940
1941	24	. . .	. . .	27,428	27,452	1,000	2,500	5,400	8,900	1,125	37,477	1941
1942	1,235	. . .	. . .	17,492	18,727	1,450	200	9,000	10,650	. . .	29,377	1942
1943	. . .	100	402	5	507	1,038	. . .	. . .	1,038	767	2,312	1943
1944	. . .	750	161	132	1,043	1,961	2,567	. . .	4,528	864	6,435	1944
1945	. . .	4,005	2,096	5,287	11,388	. . .	. . .	. . .	. . .	2,755	14,143	1945
1946	3,694	2,398	5,185	17,225	28,502	16,104	4,806	663	21,573	5,034	55,109	1946
1947	12,450	3,014	13,023	10,060	38,547	7,383	8,379	. . .	15,762	13,917	68,226	1947
1948	4,021	1,805	12,060	8,642	26,528	7,553	7,052	. . .	14,605	11,681	52,814	1948
1949	7,577	419	3,856	6,285	18,137	827	55	. . .	882	. . .	19,019	1949
1950	3,969	2,755	8,034	12,902	27,660	3,190	4,817	. . .	8,007	1,801	35,667	1950
1951	2,643	1,495	4,161	12,597	20,896	500	50	. . .	550	707	22,153	1951
1952	877	1,807	5,267	15,000	22,951	184	1,011	. . .	1,195	2,042	26,188	1952
1953	455	642	320	11,141	12,558	. . .	. . .	. . .	. . .	436	12,994	1953
Aver.	3,569	1,909	5,416	9,927	20,821	3,770	2,874	66	6,710	3,924	31,275	Aver.

NOTE:– All figures indicate "Full Cases" on a common basis of 48 lbs. net, equivalent to 96 Halves or 192 Quarters; the bulk of the actual pack being 1-lb. Talls and ½-lb. Flats.

For some previous years a few Puget Sound Pinks are included with Chums in the Washington Coast pack.

A few Steelheads are sometimes canned in these areas. Where they occur, they are included with Silvers.

The California pack consists almost entirely of Chinooks, but sometimes includes a few Silvers. Average is for the last ten years.

YOUR PROBLEMS ARE OUR BUSINESS! LET US SERVE YOU IN 1954

MEL ANDERSON
GENE SHAW
MAL McQUARRIE
HAROLD OLSEN
JOHN JONCICH
JERRY PACKARD
BILL LEE
PAUL HILBORN
ARCHIE McQUARRIE
BUS SMITH
HOWARD MARSHALL

SEATTLE MARINE & FISHING SUPPLY CO.

MARINE HARDWARE CANNERY SUPPLIES TOOLS SPORT & COMMERCIAL FISHING GEAR

DISTRIBUTORS FOR

TUBBS CORDAGE
NAVICOTE PAINTS
ADAMS NETTING
COLUMBIAN NYLON TWINE & ROPE
STANLEY TOOLS
EXIDE BATTERIES
PORTERDALE TWINE

PIER 59, FOOT OF PIKE STREET
PHONE: SENECA 6893
SEATTLE, WASHINGTON

SALMON

1953-CANNED SALMON PACK OF COASTAL AREAS-1953

	COMPANY	CANNERY LOCATION	CHINOOK			Blueback or Sockeye	SILVER or COHO				CHUM	GRAND TOTAL (Full Cases)	
			1-lb. Talls	¼-lb. Flats (48-lbs.)	Total (Full Cases)	½-lb. Flats (8 doz)	1-lb. Talls	½-lb. Flats (8 doz.)	¼-lb. Flats (48-lbs.)	Total (Full Cases)	1-lb. Talls		
	Washington												
1	Mohawk Packing Co.	Moclips	642	...	642	280	70	...	...	70	752	1,744	1
2	Paragon Packing Co.	Hoquiam	.	...	...	...	...	(1) 250	...	250	..	250	2
3	Strand Fisheries	Hoquiam	...	...	...	175	...	...	...	...	...	175	3
4	West Coast Fish Co.	Aberdeen	...	...	...	...	...	...	...	...	(2) 8,389	8,389	4
	Miscellaneous		...	...	...	...	...	...	...	...	2,000	2,000	
	TOTAL WASHINGTON COAST		642	...	642	455	70	250	...	320	11,141	12,558	
	California												
1	Tom Lazio Fish Co.	Eureka	...	339	339	...	...	...	97	97	...	436	1
	TOTAL Coastal Areas		642	339	981	455	70	250	97	417	11,141	12,994	

NOTES: — No canned salmon pack reported on Oregon Coast in 1953.
(1) Smoked salmon — includes some Chinooks, not segregated. (2) Chums, as tabulated, include 8 cases of Pinks.

WEAKNESS in the coastal salmon runs all along the line, plus an active freezer demand for Silvers, kept the canned salmon pack of the coastal areas down to 12,994 cases in 1953, just about half the pack of the year before, and a poor comparison with the 10-year average of 31,275.

Bluebacks, Chinooks and Silvers all were very short of the year before and the average figures. Chums, on the other hand, were above the five-year average, although short of the 1952 production. This condition undoubtedly resulted from the relative weakness manifest in the Chum market by the time the coastal areas got into production.

Drastic Program Proposed

In response to the demand of fishermen and operators alike that strong measures be taken to reverse the trend of depletion in the Alaska salmon fishery, the new administration of the U.S. Fish and Wildlife Service moved vigorously in the late weeks of 1953 to put into effect with 1954 a program of restriction, research and rehabilitation designed to restore the salmon fishery to health. This program calls for great sacrifices on the part of the industry, and necessarily will result in restriction of operations for some seasons.

In view of this, it must be recognized that in all probability the supply of canned salmon available for the American public will be limited for some years to come.

IT'S TOPS—

PEACOCK Brand

SALMON

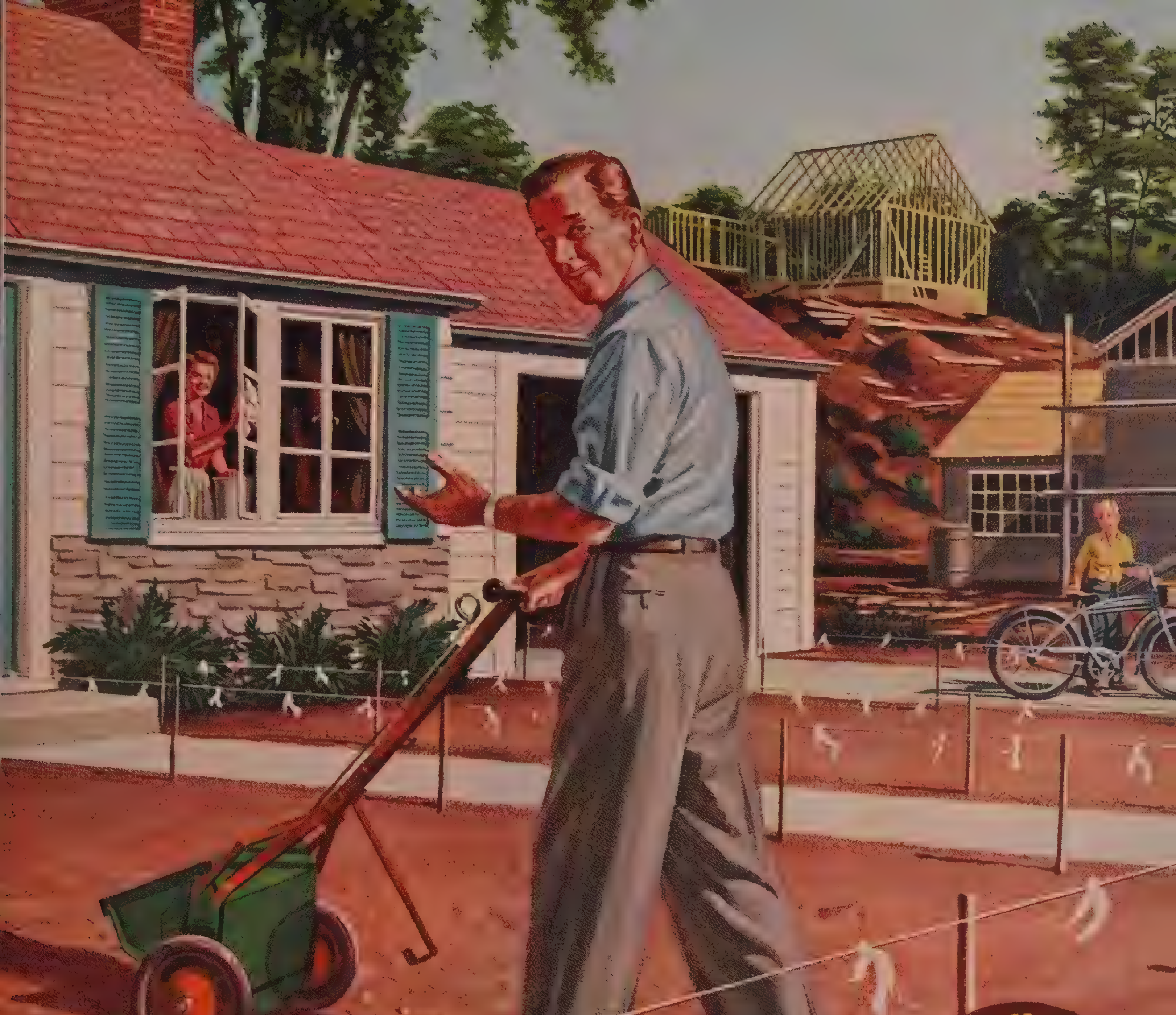
WHITE MEAT TUNA • CRAB MEAT • SMOKED STURGEON

•

POINT ADAMS PACKING COMPANY

HAMMOND, OREGON

The Quality Packers of the Columbia River



WICKWIRE
ROPE
A
CF&I PRODUCT

Our house? Built with wire rope?

Not only yours, Mr. Brown, but millions of others too.

A miracle of the postwar years has been the construction of more than 7-million new dwelling units. Accomplishment of this tremendous task has called for "muscles of steel"—rugged wire rope that is a vital factor in mining the ore, quarrying the stone and bringing out the timber that comprise the basic components of every house and building—large or small.

Supplying these "muscles of steel" to the giant that is American industry is our big job here at Wickwire—a job we've been doing well for over half a century.

In the mines . . . the quarries . . . the logging camps—and wherever wire rope is used, they'll tell you that for utmost safety, longer life and most economical service you can always count on the quality and strength that is built into Wickwire Rope.

A YELLOW TRIANGLE ON THE REEL IDENTIFIES WICKWIRE ROPE

THE COLORADO FUEL AND IRON CORPORATION—Abilene (Tex.) • Denver
Houston • Odessa (Tex.) • Phoenix • Salt Lake City • Tulsa
PACIFIC COAST DIVISION—Los Angeles • Oakland
Portland • San Francisco • Seattle • Spokane
WICKWIRE SPENCER STEEL DIVISION—Boston • Buffalo • Chattanooga
Chicago • Detroit • Emlenton (Pa.) • New Orleans • New York • Philadelphia

WICKWIRE ROPE
CF&I PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

"THE
FIRST LADY
OF
RADIO"

THREE TOP VARIETIES OF SALMON + + +

MR. PACKER: MR. FISHERMAN:

If you sell COHOE, SOCKEYE (Blueback) or CHINOOK SALMON You are Benefitting from the Advertising of

Red Breast Brand

Because that Advertising Improves the Market for These Top Varieties of Salmon.

•

During the past four summers, Advertising Campaigns on Red Breast Brand Salmon have been beamed at the great Metropolitan New York Market by that nationally famous radio personality . . .

MARY MARGARET McBRIDE

and Sponsored by . . .

F. A. GOSSE COMPANY

1800 Exchange Bldg.
MA 0475
Seattle 4, Washington
Established 1919

Red Breast
BRAND
FANCY
STEAK
BLUEBACK
SALMON
DISTRIBUTED BY F. A. GOSSE COMPANY SEATTLE, U.S.A.

Purveyors to the Yours Faithfully F-A-G Epicurean World
FINE SEA FOODS

Red Breast
BRAND
FANCY RED
STEAK
SOCKEYE
SALMON
DISTRIBUTED BY F. A. GOSSE COMPANY SEATTLE U.S.A.

Red Breast
BRAND
COHO
FANCY
SALMON
STEAK
DISTRIBUTED BY F. A. GOSSE COMPANY SEATTLE

Red Breast
BRAND
FANCY
STEAK
CHINOOK
SALMON
DISTRIBUTED BY F. A. GOSSE COMPANY SEATTLE, U.S.A.

CONSISTENT decline which has marked the Columbia River canned salmon pack for several years was again manifest in 1953. The numerical drop from the year before was more disturbing than might appear because production in 1952 was limited by a strike during the most productive part of the season.

With the single exception of the not-too-important Steelhead item, all varieties were down from the year before, and all categories were very much below the 10-year average for the stream.

Chinooks, with 93,800 cases, were under 100,000 cases for the first time, with the exception of 1952, when the strike unquestionably was responsible for holding the pack below this figure.

The Columbia River pack of Chums, while slightly short of that for the year before, was notable nevertheless for approximating the 10-year average for this item, never an important element in the Columbia's canned output.

Analysis of 1953 fishing on the Columbia shows that the decline was due to failure of the August run, long the volume-supporting factor in the pack. The early weeks of the season—when the quality is highest—contributed a very large part of the total production.

The industry does not disguise its concern over the decreasing volume of the August run. This was suspected in 1952 in spite of the strike; and also in 1951, when the August fish came late and in lesser volume than fishermen had come to expect

1953-COLUMBIA RIVER CANNED SALMON PACK-1953

	COMPANY	CANNERY LOCATION	CHINOOK							SILVERSIDE			Blue-black	CHUM	STEELHEAD TROUT			GRAND TOTAL (Full Cases)	
			Fancy				Choice, Standard & Pale												
			1-lb. Flats	½lb.Flats & ovals (8 doz.)	¼lb.Flats & ovals (48-lbs.)	Total	1-lb.Talls Flats, & Ovals	½ & ¼-lb. Flats (48-lbs.)	Total	1-lb.talls	½ & ¼-lb. Flats (48-lbs.)	TOTAL	½ & ¼-lb. Flats (48-lbs.)	All Sizes (48-lbs.)	1-lb.Talls & Flats	½ & ¼-lb. Flats (48-lbs.)	TOTAL		
1	Barbey Packing Corp	Astoria, Ore.	..	5,235	..	5,235	...	1,574	1,574	.	835	835	353	(14) 572	...	1,760	1,760	10,329	1
2	Chinook Packing Co.	Chinook, Wash	.	2,005	...	2,005	646	1,159	1,805	..	..	...	42	(15) 2,756	...	...	...	6,608	2
3	Columbia River Packers Assn.	Astoria, Ore.	.	20,758	223	20,981	1,651	(2) 16,012	17,663	.	(3) 14,219	14,219	(4) 1,141	(5) 1,346		(6) 8,160	8,160	63,510(19)	3
4	Keystone Packing Co.	Ilwaco, Wash.		4,909	...	4,909	577	(7) 1,865	2,442	780	(4) 803	1,583	(4) 91	3,507	.	...	...	12,532	4
5	New England Fish Co.	Chinook, Wash.(1)	.	3,355	...	3,355	...	2,053	2,053	...	43	43	123	(16) 253	...	..	...	5,827	5
6	Point Adams Packing Co.	Hammond, Ore.	543	5,551	79	6,173	844	(8) 3,355	4,199	639	3,054	3,693	711	(17) 3,144	..	2,267	2,267	20,187	6
7	Portland Fish Co.	Portland, Ore.	...	5,321	...	5,321	...	(9) 228	228	...	(10) 772	772	115	41	...	1,333	1,333	7,810	7
8	Seufert Brothers Co.	Seufert, Ore.	. .	...	...	...	114	188	302	...	...	...	..	38	1,296	1,129	2,425	2,765	8
9	Union Fishermen's Co-Op. Pkg. Co.	Astoria, Ore.	1,322	4,910	1,601	7,833	1,079	(11) 6,712	7,791	997	(12) 1,405	2,402	295	694	(18) 908	(13) 2,308	3,216	22,231	9
	Total		1,865	52,044	1,903	55,812	4,911	33,146	38,057	2,416	21,131	23,547	2,871	12,351	2,204	16,957	19,161	151,799	

NOTE;– Unless otherwise noted, figures for Bluebacks represent Halves (basis of 8 dozen); for Chums, 1-lb. Talls. Quarters (basis of 48 lbs.) are included with Halves or other styles, as follows: (2) 252 cases; (3) 7,194 cases; (4) All Quarters; (5) 149 cases (reported as Pinks, but included with Chums); (6) 4,204 cases; (7) 113 cases; (8) 100 cases; (9) 76 cases; (10) 511 cases; (11) 1,260 cases; (12) 944 cases; (13) 364 cases. (14) In Chum column, but reported as Pinks. (15) Includes 1,331 full cases Halves. (16) Includes troll-caught Pinks, 102 full cases Halves. (17) Includes 163 full cases Halves and 415 cases Talls, reported as Pinks. (18) Includes 840 cases 1-lb. Flats. (5) Includes 158 cases 1-lb Talls reported as Pinks. (1) Canned in plant of Chinook Packing Co (19) C R P A pack as of November 30, not quite complete.

BONNEVILLE DAM SALMON ESCAPEMENT

Year	Chinook	Steelhead	Silver	Blueback	Chum	Total	Year
1938	271,799	107,003	15,185	75,040	2,117	471,144	1938
1939	286,216	121,922	14,382	73,382	1,168	497,070	1939
1940	391,588	185,161	11,917	148,805	1,729	739,200	1940
1941	461,458	118,087	17,911	65,745	5,270	668,471	1941
1942	403,938	151,345	12,401	55,475	1,865	625,024	1942
1943	313,123	92,131	2,547	39,845	790	448,436	1943
1944	240,763	100,521	4,208	15,071	954	361,517	1944
1945	297,488	120,144	791	9,501	727	428,651	1945
1946	445,743	142,548	3,897	74,354	1,178	667,720	1946
1947	480,376	135,434	11,174	171,139	202	798,325	1947
1948	419,555	139,062	4,081	131,541	3,636	697,875	1948
1949	277,697	119,285	1,004	51,444	2,028	451,458	1949
1950	357,375	114,079	10,153	77,993	1,069	560,669	1950
1951	331,788	140,689	5,201	169,428	1,051	648,157	1951
1952	420,879	260,990	7,768	184,654	1,505	875,796	1952
1953	332,479	223,915	13,018	235,219	1,728	806,359	1953

AMERICAN CANNED FISH VALUES BY AREAS

YEAR	PACIFIC COAST						States Other than Pacific TOTAL	United States TOTAL
	Alaska	California	Oregon	Washington	TOTAL	% of Nat'l. Total		
1935	$26,072,966	$25,252,965	$ 2,851,987	$ 4,955,117	$ 59,133,035	78.8	$15,860,684	$ 74,993,719
1936	45,078,945	26,296,129	2,972,959	3,582,880	77,930,913	82.3	16,726,956	94,657,869
1937	45,041,499	30,741,773	4,163,681	5,276,928	85,223,881	81.2	19,713,750	104,937,631
1938	37,059,151	25,232,688	3,638,815	3,762,575	69,693,229	83.5	13,752,660	83,445,889
1939	34,775,988	31,639,354	4,622,664	5,192,077	76,230,083	79.0	20,228,510	96,458,593
1940	31,836,480	36,949,395	5,294,488	3,987,170	78,067,533	82.9	16,046,513	94,114,046
1941	56,453,007	39,830,950	7,704,434	7,130,960	111,119,351	80.1	27,564,806	138,684,157
1942	48,874,227	44,506,354	12,375,323	8,319,559	114,075,463	78.8	30,567,784	144,643,247
1943	58,479,130	46,842,918	7,242,950	2,975,728	115,540,726	81.8	25,615,584	141,156,310
1944	52,072,335	53,653,337	11,720,608	3,706,586	121,152,866	79.5	31,158,318	152,311,184
1945	45,491,662	60,219,179	12,543,519	7,326,616	125,580,976	82.0	27,219,595	152,800,571
1946	55,081,941	85,457,037	12,164,093	18,202,350	170,905,421	75.1	56,724,033	227,629,454
1947	89,135,362	116,493,682	20,626,850	24,949,347	251,205,241	80.9	59,475,179	310,680,420
1948	97,657,187	137,876,592	21,926,969	18,497,700	275,958,448	82.1	60,223,031	336,181,479
1949	82,225,067	119,497,465	13,683,517	23,009,231	238,415,280	80.6	57,088,625	295,503,905
1950	82,828,503	140,251,694	19,250,557	25,370,759	267,701,513	81.3	62,661,340	330,362,853
1951	80,748,052	122,572,382	15,454,209	27,312,377	246,087,020	81.7	55,123,275	301,210,295
1952	77,586,903	124,582,452*	14,284,187	21,362,466	237,816,008	77.7	68,013,190	305,829,198

*Includes Hawaii

Canning and Selling Salmon for Over Sixty Years

Red Salmon Co.

NAKNEK, BRISTOL BAY, ALASKA

Packing

RED ALASKA SOCKEYE, ALASKA KING and ALASKA CHUM SALMON

NET CONTENTS ONE POUND
DEEP SEA
SOCKEYE
ALASKA RED
SALMON

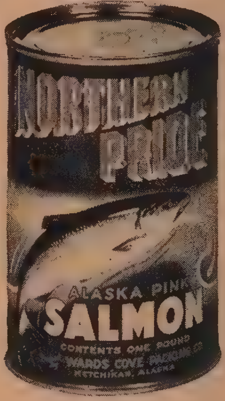
Wards Cove Packing Co.

Beegle Packing Co.

KETCHIKAN, ALASKA

Packing

RED ALASKA SOCKEYE, ALASKA COHO, PINK and CHUM SALMON


NORTHERN PRIDE
ALASKA PINK
SALMON
CONTENTS ONE POUND
WARDS COVE PACKING CO.
KETCHIKAN, ALASKA

Frank B. Peterson Co.

SEATTLE, WASHINGTON

SELLING

"DEEP SEA" BRAND — Alaska Red Salmon, Fancy Albacore Tuna, Minced Razor Clams and Dungeness Crabmeat.

"ROYAL CLUB" BRAND — Alaska Pink Salmon.

"JACK FROST" BRAND — Alaska Red Salmon and Albacore Tuna Flakes.

"PIRATE" BRAND — Alaska Chum Salmon and Grated Albacore Tuna.

DEEP SEA
ALASKA RED
SALMON

Royal Club
SALMON
NET CONTENTS 7¾ OZ.

PIRATE
BRAND
Salmon

GENERAL OFFICES:

303 East Northlake Seattle 5, Washington Phone: EV 0020
Mail Address: P. O. Box 87, University Station, Seattle 5, Wash.

CABLE ADDRESS:
"Peterson", Seattle

on the basis of decades of experience.

In 1953, however, there was only scanty fishing until the last two days of the season; and the bulge which came at the close fell far short of the volume regarded as characteristic of this run.

Value of Columbia River canned salmon for 1953 is figured at $4,762,000, as compared with $5,623,000 for 1952. Ten-year average value for the Columbia's pack is $6,736,000, virtually $2,000,000 above the 1953 figure.

Salmon canning operations down the Oregon coast were negligible in 1953, modern practice calling for the purchase of fish at coastal points and its delivery by fast truck to Columbia River points for canning.

Similarly, the up-river canning operations which at one time accounted for a substantial percentage of the river's production now have been almost entirely discontinued in favor of fast, refrigerated transport of the fish overnight to central packing operations, usually at Astoria.

Although it had successfully stemmed this trend for decades, the famous old Seufert cannery above The Dalles finished its run in 1953.

This plant and the property on which it stands will be flooded by the pool created by The Dalles dam.

Indian fishery rights in the Celilo sector of the river were compensated for by Federal grant, as these fishing grounds will also be lost in the lake above the dam.

COLUMBIA RIVER CANNED SALMON PACK

Salmon canning on the Columbia River commenced in 1866, with a pack of about 4,000 cases valued at $64,000; but no segregation by species is available prior to 1889. Production increased rapidly to a peak of 629,400 cases in 1883, valued at $3,147,000; then fell to 356,000, valued at $2,124,000, in 1887; the average output for intervening years being 351,091 cases, valued at $2,066,227.

YEAR	# of Canneries	CHINOOK		BLUEBACK		SILVERSIDE		CHUM or KETA		STEELHEAD TROUT		TOTAL		YEAR
		Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	
1888	28	...	...	...	...	...	...	...	...	...	...	372,477	$2,234,862	1888
1889	21	266,697	$1,600,182	17,797	$101,051	...	...	...	...	25,391	$108,587	309,885	1,809,820	1889
1890	21	335,604	1,946,087	57,345	290,069	...	...	...	...	42,825	171,300	435,774	2,407,456	1890
1891	22	353,907	2,038,566	15,482	284,242	...	...	...	...	29,564	118,156	398,953	2,440,964	1891
1892	24	344,267	1,996,388	66,547	372,909	4,176	$20,880	...	...	72,348	288,892	487,338	2,679,069	1892
1893	24	288,773	1,559,374	30,459	152,295	29,107	116,428	2,311	$6,933	65,226	260,904	415,876	2,095,934	1893
1894	24	351,106	1,896,976	43,814	224,430	42,758	171,032	...	...	52,422	209,688	490,100	2,501,126	1894
1895	24	444,909	2,428,658	18,015	86,523	99,601	329,683	22,493	62,591	49,678	203,542	634,696	3,110,997	1895
1896	24	370,943	1,804,511	16,983	81,518	44,108	141,145	...	...	49,663	198,652	481,697	2,261,826	1896
1897	22	432,753	1,804,221	12,972	51,888	60,850	197,762	...	...	46,146	165,440	552,721	2,219,311	1897
1898	23	329,566	1,490,394	66,670	300,015	65,431	222,465	...	...	26,277	60,352	487,933	2,073,226	1898
1899	17	255,824	1,458,175	23,969	134,723	29,608	112,055	11,379	33,836	11,994	39,186	332,774	1,777,975	1899
1900	16	262,392	1,821,258	13,162	92,184	44,925	202,163	17,696	63,706	20,597	102,985	358,772	2,282,296	1900
1901	...	...	...	...	...	...	...	...	...	...	...	390,183	1,942,660	1901
1902	14	270,580	1,428,743	17,037	86,465	10,532	44,732	10,401	41,604	8,593	42,965	317,143	1,644,509	1902
1903	16	301,762	1,610,614	8,383	42,867	12,181	49,869	10,000	37,500	7,251	36,255	339,577	1,777,105	1903
1904	20	320,378	1,944,690	12,911	78,048	31,254	118,357	20,693	52,691	9,868	48,892	395,104	2,242,678	1904
1905	19	327,106	1,962,636	7,768	46,608	26,826	114,011	25,751	65,206	9,822	49,110	397,273	2,237,571	1905
1906	19	311,334	1,868,007	7,816	54,712	41,446	124,338	27,802	69,505	6,500	32,500	394,898	2,149,062	1906
1907	19	258,433	...	5,504	...	31,757	...	22,556	...	5,921	...	324,171	1,763,490	1907
1908	14	210,096	...	8,581	...	31,432	...	16,884	...	10,726	...	253,341	1,380,708	1908
1909	15	162,131	1,203,546	27,908	214,561	42,178	185,070	24,542	57,115	17,283	99,796	274,087	1,760,088	1909
1910	15	244,285	1,882,137	6,234	34,287	68,922	363,688	66,538	232,883	5,436	31,203	391,415	2,544,198	1910
1911	15	405,862	2,204,185	5,988	47,904	79,416	549,478	53,471	203,198	8,594	47,399	543,331	3,052,164	1911
1912	15	220,317	1,988,526	8,210	85,384	31,842	177,248	18,699	46,590	6,958	22,108	285,666	2,319,856	1912
1913	15	192,116	1,664,670	11,152	93,677	40,969	175,412	13,303	29,486	8,939	49,142	266,479	2,012,387	1913
1914	17	289,464	2,573,502	35,311	376,924	69,769	380,666	49,285	205,541	10,792	59,356	454,621	3,595,989	1914
1915	19	406,486	3,694,361	5,459	56,707	33,336	173,234	86,530	251,632	26,723	129,358	558,534	4,305,292	1915
1916	20	395,166	3,572,203	3,790	27,288	52,084	335,114	77,766	307,483	18,999	118,987	547,805	4,361,075	1916
1917	20	403,637	5,023,529	7,968	111,552	64,299	700,680	53,659	386,596	23,783	292,538	555,218	6,530,939	1917
1918	20	400,952	5,222,983	37,833	605,328	98,145	1,072,843	29,846	215,669	24,605	350,071	591,381	7,466,924	1918
1919	21	392,125	5,455,550	7,268	145,360	90,728	1,142,767	75,493	541,989	14,414	205,254	580,028	7,490,920	1919
1920	22	420,467	5,661,580	2,617	62,808	27,024	257,806	18,792	99,564	12,645	116,859	481,545	6,198,617	1920
1921	20	267,582	3,761,321	6,045	120,900	34,381	233,372	4,821	19,791	10,142	68,266	323,241	4,203,649	1921
1922	23	237,230	3,724,393	30,743	614,860	90,437	633,935	8,844	47,130	24,920	186,675	392,174	5,206,993	1922
1923	23	289,586	4,967,657	38,309	766,180	101,554	673,954	25,508	135,168	25,968	187,965	480,925	6,730,924	1923
1924	22	293,716	4,508,236	7,366	129,840	112,308	992,865	57,748	303,356	29,734	285,107	500,872	6,219,404	1924
1925	21	250,809	5,423,129	5,650	106,220	113,554	1,488,855	55,812	272,398	14,637	177,866	540,452	7,468,468	1925
1926	21	295,302	4,744,131	21,736	434,720	97,142	1,027,597	32,853	181,216	32,690	356,418	479,723	6,744,064	1926
1927	22	339,446	5,559,202	6,887	147,378	74,879	585,816	68,449	425,240	30,148	311,070	519,809	7,028,705	1927
1928	24	251,404	4,355,218	4,814	100,131	49,136	478,355	124,953	747,619	16,339	222,139	446,646	5,903,462	1928
1929	21	242,938	4,234,214	10,072	181,296	90,684	917,561	54,619	314,928	23,804	257,025	422,117	5,905,024	1929
1930	21	281,346	4,092,810	9,823	194,460	110,430	1,156,042	11,371	43,324	16,535	171,541	429,505	5,658,177	1930
1931	20	294,798	3,754,929	4,125	66,000	39,268	247,878	3,518	11,754	11,990	110,429	353,699	4,191,000	1931
1932	15	216,511	2,023,390	2,795	33,540	46,492	280,853	17,261	44,879	13,132	91,924	296,191	2,474,586	1932
1933	14	251,157	2,719,303	6,921	96,894	36,430	263,190	24,398	107,351	17,805	142,440	336,711	3,329,178	1933
1934	13	251,068	2,630,152	6,869	82,428	65,428	536,731	24,455	92,608	14,901	121,000	362,721	3,462,919	1934
1935	10	205,870	2,479,450	1,302	17,619	95,184	725,868	15,495	59,499	14,888	122,846	332,739	3,405,282	1935
1936	11	220,188	2,964,058	9,837	137,718	36,541	303,263	30,597	110,149	19,282	317,867	316,445	3,833,055	1936
1937	11	291,343	4,256,819	7,526	126,436	69,801	725,996	30,592	138,309	17,568	189,734	416,830	5,437,294	1937
1938	10	173,892	2,707,267	13,889	260,369	67,257	630,364	37,704	143,275	15,248	152,480	307,990	3,893,755	1938
1939	10	207,595	3,336,206	5,301	102,359	69,082	730,549	15,201	75,416	25,293	320,025	322,472	4,666,141	1939
1940	11	244,570	3,785,681	23,974	471,530	59,737	623,681	25,282	125,420	33,436	373,514	386,999	5,379,826	1940
1941	11	328,609	5,558,254	33,070	661,400	35,727	481,834	83,144	572,994	33,162	453,502	513,712	7,727,984	1941
1942	12	274,750	5,692,929	23,256	625,230	26,541	497,070	118,051	911,538	21,803	429,678	464,401	8,156,445	1942
1943	11	130,373	3,094,505	2,880	77,586	5,707	61,065	12,439	112,421	16,261	323,874	167,660	3,669,451	1943
1944	10	163,047	3,714,591	758	20,342	12,210	137,072	1,525	11,590	19,222	375,838	196,762	4,259,433	1944
1945	8	132,014	3,095,228	112	3,001	22,154	244,060	1,032	8,848	19,314	363,068	*175,670	3,723,456	1945
1946	11	159,872	5,940,740	9,726	369,588	6,883	206,490	†15,617	247,392	17,373	510,720	†209,471	7,274,939	1946
1947	10	250,318	8,613,000	15,079	664,000	42,789	1,278,000	17,121	252,000	21,999	650,000	347,306	11,457,000	1947
1948	12	235,310	9,342,000	3,339	147,000	39,425	1,099,000	26,201	498,000	19,977	615,000	324,242	11,701,000	1948
1949	12	133,347	3,682,000	** 6,630	225,000	16,740	415,000	12,386	186,000	9,019	221,000	178,122	4,729,000	1949
1950	11	136,635	4,964,201	3,630	146,687	29,507	939,296	12,952	234,457	10,266	360,830	192,990	6,645,471	1950
1951	10	143,046	5,497,305	4,552	186,543	29,099	841,234	11,566	192,850	14,862	469,615	203,125	7,187,547	1951
1952	9	95,353	3,506,181	9,824	413,774	29,701	875,380	13,759	214,837	18,979	612,987	167,616	5,623,159	1952
1953	8	93,869	3,461,259	2,871	103,356	23,547	560,296	12,351	182,346	19,161	455,456	151,799	4,762,713	1953
AVER.	10	154,281	5,181,650	5,652	227,929	25,205	659,583	12,451	202,832	17,017	463,451	214,710	6,736,372	AVER.

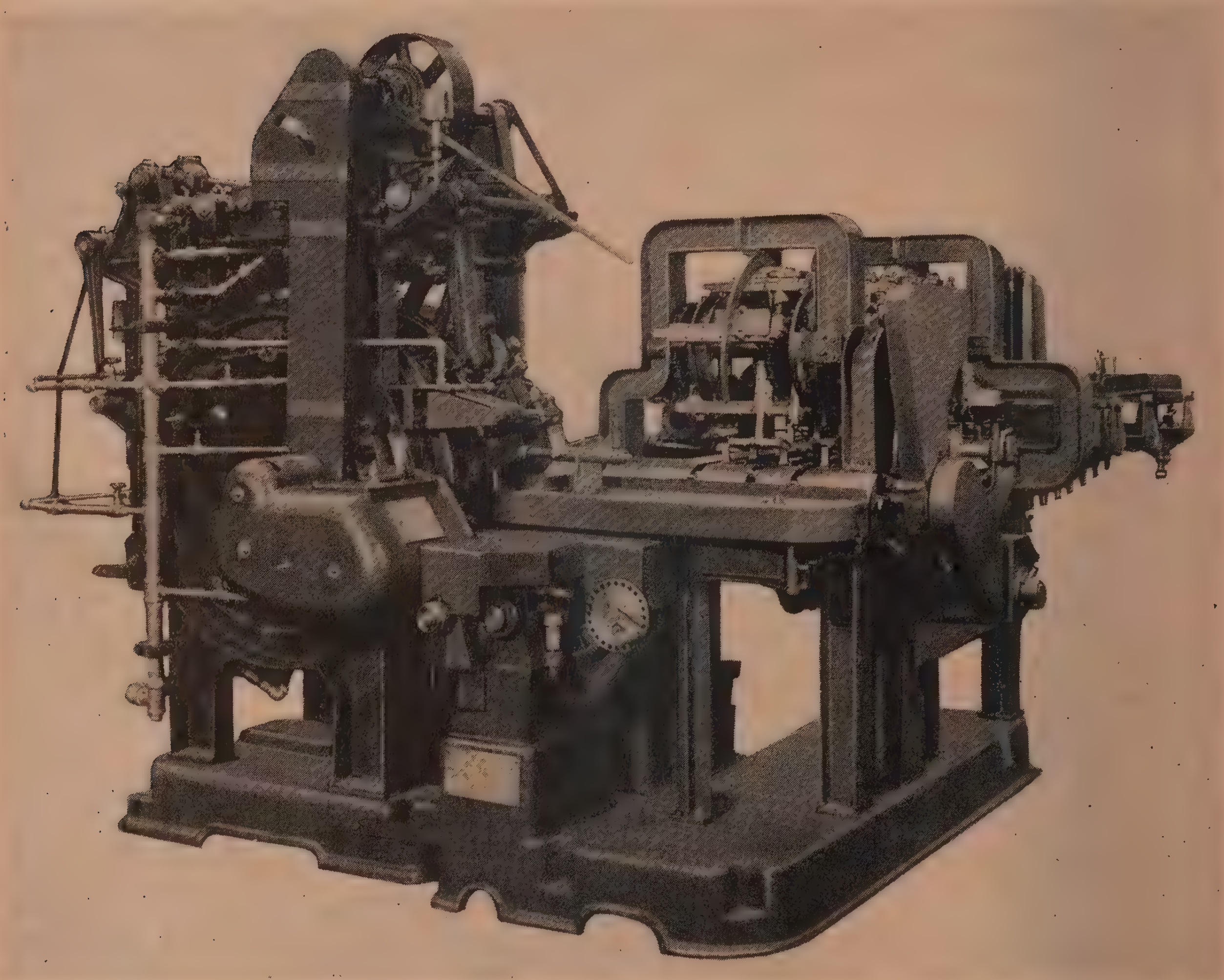
*Includes 1,044 cases of Pinks canned from Puget Sound fish.
†Includes 1,873 cases of Pinks canned from Puget Sound fish.

** Mostly Quinault River Bluebacks.

The Average figures are for the last ten years.

The Model K "IRON CHINK"

SAVES FISH—SAVES LABOR



TO REDUCE COSTS, here is the machine that will help you. The testimony of ***all*** packers using the New Model K "Iron Chink" is that it does save fish and labor and therefore costs. It should be a must in your plans.

SMITH CANNERY MACHINES COMPANY

SEATTLE, U. S. A.

SALMON
CANADA

With production running above 1,800,000 cases, 1953 proved one of the best salmon years in the history of the Canadian canning industry. The flush pack was heavy in Sockeyes and Pinks, and provided encouraging evidence of a healthy and expanding fishery as an objective to neighboring Alaska.

For British Columbia salmon fishermen and packers 1953 was a year to be remembered as one of the "big ones" and it was a year of surprises.

The total pack ran well over 1,810,000 cases, far beyond early season estimates that ranged from 1,300,000 to 1,600,000 cases. No one had taken into consideration the possibility that the season would be one of the best in history for the Fraser River Sockeye run; and after the slow and disappointing Pink returns in the northern areas few would have hazarded a guess that between the first week of August and mid-September more than 700,000 cases of Pinks would be caught and packed. Yet such were the two outstanding facts, productionwise, of a truly notable year.

Apart from the indifferent harvest in the northern areas, fishermen and packers had small cause for complaint respecting the size of their catch and pack. Well over half a million cases of Sockeyes were packed — a figure exceeded only twice since the Hell's Gate slide in 1913 which upset the whole pattern of the Fraser River fishery for generations.

The total pack of Pinks was close to 800,000 cases, matched only once since the record-shattering 1930, when more than a million cases were packed. The Chum pack, too, was well above the average.

1953 Operations Harmonious

Compared with turbulent 1952, when the industry was beset by disputes between fishermen and operators leading to strikes and tieups, the year was a harmonious one. Fishing started without the usual delays, and throughout the season a relatively high degree of intensity was maintained. On at least one occasion there was the heaviest concentration of vessels and gear in the province's fishery annals.

Operations opened on the Fraser Sockeye run in an atmosphere charged with excitement and anticipation because the run was related to the cycle of 1913, when nearly a million cases of Sockeye were packed on the Canadian side, and more than that by American canneries—the year that saw the tragic slides that threatened to obliterate the fishery. The year 1953 would be the first to see the results of the Hell's Gate fishway as affecting that cycle's run. It was interesting to recall that the 1953 cycle would be supported almost entirely by races which were practically extinguished by the slide and barely existent only eight years before.

1953-BRITISH COLUMBIA CANNED SALMON PACK-1953

	# Canneries	(Cases)							
		Sockeye	Springs	Steelheads	Bluebacks	Coho	Pinks	Chums	TOTAL
District No. 1 (FRASER RIVER & HOWE SOUND) Anglo-B.C. Packing Co., Ltd. - "Phoenix" British Columbia Packers, Ltd. - "Imperial" Canadian Fishing Co., Ltd. - "Home" Colonial Packers, Ltd. - "Colonial" Great West Packing Co., Ltd. - "Great West" Johnston Fishing & Packing Co., Ltd. - "Glen Rose" Francis Millerd & Co., Ltd. - "Great Northern" National Fisheries, Ltd. - "National" Nelson Bros. Fisheries, Ltd. - "St. Mungo" Queen Charlotte Fisheries, Ltd. - "Bidwell" Tulloch Fisheries, Ltd. - "Tulloch" District No. 2 (SKEENA & NAAS AREAS) Anglo-B.C. Packing Co., Ltd. - "North Pacific" British Columbia Packers, Ltd. - "Sunnyside" "Rupert Cold Storage" Cassiar Packing Co., Ltd. -"Cassiar" Canadian Fishing Co., Ltd. - "Prince Rupert" Nelson Bros. Fisheries, Ltd. - "Port Edward" District No. 2 (CENTRAL AREAS, etc.) British Columbia Packers, Ltd. - "Namu" Canadian Fishing Co., Ltd. - "Goose Bay" J. H. Todd & Sons, Ltd. - "Klemtu"	20	510,100	12,177	2,724	2,055	108,115	793,382	392,716	1,821,269

NOTE:– Figures are preliminary statistics of the Canadian Fisheries Department and are subject to later correction. Owing to a change of policy, publication of statistics for the pack by districts in British Columbia has been discontinued, because present operating practice, in which fish from one district may be canned in another tends to confuse and impair information based on quantities canned within specific areas.

Figures are for full cases of 48 one-pound cans or equivalent.

COPPER RIVER PACKING CO.

Packers of

CANNED SALMON

* * *

2408 Commodore Way SEATTLE 99, WASH.

PUGET SOUND BROKERAGE CO.

Lobby No. 1, Central Bldg.
Seattle 4, Wash. Phone: SEneca 4964

Distributors
Consistent Quality

CANNED SALMON
and other
SEAFOOD PRODUCTS

Featured Brands
ALASKA GEM KOOL NORTH
SEA PRINCE

There is Something New in SALMON

GREAT NORTHERN
FANCY RED SOCKEYE
SALMON
GREAT NORTHERN
FANCY RED SOCKEYE
SALMON

It's the totally new, totally different GREAT NORTHERN PACK.—Canned Salmon Steaks, in the oval-shaped tin.

CHOICE, middle cuts of thick, juicy steaks with all the "fresh-caught flavor" of fine Salmon straight from the sea.

FRANCIS MILLERD & CO., LTD.

P.O. Box 189, Vancouver, B.C.

NORTH WEST DISTRIBUTORS
LIMITED

Specializing in

· CANNED SALMON ·

Export & Domestic

1206 Hamilton Street
VANCOUVER 3, CANADA

Telephone: PACIFIC 9571
Cables: NORWED

Early Run Best Ever

It was gratifying, therefore, to note that the Fraser's Sockeye harvest up to July 10 was the largest recorded for a similar period since 1899, with most of the fish bound for the Stuart River spawning grounds. The Chilko race had been the mainstay of this cycle year, but it had shifted its year of maximum productivity to 1952 cycle.

The big run appeared off the Fraser late in July and early August, when the best performance on a cycle basis since 1917 was recorded, with 295,000 cases packed by British Columbia canneries alone. The total 1953 escapement of Sockeye to the Fraser River system was the largest on this cycle since 1913.

Individual fishermen made unusually big hauls on the Fraser during that period of intense activity, a few isolated cases of 600 to 700 fish per boat being reported by jubilant gillnetters. Canneries were well prepared for the onrush in spite of the fact that the pack rolled up faster than anyone had anticipated. There was none of the disruption and congestion that marked the season of 1942 when more than 400,000 cases of Sockeye were packed on the Fraser River, and this was probably due in part to the fact that the slow and orderly early operation in the northern areas had prevented a pileup of early-caught fish in the canneries. The operators took the situation in stride, their only anxiety being over where they could sell all the Sockeye.

International Enterprise Succeeds

In an enviable position were the members and staff of the International Pacific Salmon Fisheries Commission who were justifiably accorded a good deal of the credit for the abundant harvest. No one would dispute that 1953 provided the clinching argument, if one were needed, to support the theory on which the whole international program for restoration of the Fraser River Sockeye fishery was based. The year's experience demonstrated that the Fraser River Sockeye is a remarkably resilient creature; that it will battle its way to survival over seemingly insurmountable barriers—if man-made obstacles can be prevented or removed. The Commission removed the biggest obstacle at Hell's Gate, and that alone brought about an impressive resurgence of the run in 1953, with the promise of similarly stimulating results in future years.

Confident that its biologists and its conservation measures were definitely "on the right track", the Commission in co-operation with the Canadian department of fisheries maintained a policy of vigilance throughout the operating season to make sure that sufficient escapement was achieved. Consequently there were numerous closures, some of them criticized, but the Commission endeavored to carry out its policy with a minimum effect on the industry's economy.

There was plenty of evidence dur-

BRITISH COLUMBIA CANNED SALMON PACK

YEAR	Sockeyes Fraser River	Sockeyes Other Districts	Total Sockeyes	Springs	Cohoes & Bluebacks	Steelheads	Pinks	Chums	TOTAL Cases	YEAR
1903	204,809	163,908	368,717	25,657	51,918	....	27,382	....	473,674	1903
1904	72,688	250,536	323,226	38,675	66,351	....	....	37,642	465,894	1904
1905	837,489	243,184	1,080,673	28,359	44,458	....	13,970	....	1,167,460	1905
1906	183,007	276,672	459,679	32,344	69,132	....	68,035	....	629,460	1906
1907	59,815	254,259	314,074	26,098	87,900	683	118,704	....	547,459	1907
1908	63,126	291,897	355,023	28,164	81,917	1,137	76,448	....	542,689	1908
1909	542,248	298,193	840,441	19,017	61,918	....	46,544	....	967,920	1909
1910	133,045	432,870	565,915	28,789	74,382	140	34,613	58,362	762,201	1910
1911	58,487	325,022	383,509	48,456	119,702	100	305,247	91,951	948,965	1911
1912	108,784	335,778	444,762	80,437	165,102	207	247,743	58,325	996,576	1912
1913	684,596	287,582	972,178	41,049	69,822	....	192,887	77,965	1,353,901	1913
1914	185,483	351,213	536,696	49,328	120,201	....	220,340	184,474	1,111,039	1914
1915	89,040	387,002	476,042	58,104	146,956	2,927	367,352	82,000	1,133,381	1915
1916	27,394	187,395	214,789	66,726	183,623	9,982	280,644	240,201	995,065	1916
1917	123,614	116,234	339,848	76,276	157,589	11,740	496,749	475,273	1,497,475	1917
1918	16,849	259,610	276,459	107,354	191,068	15,916	527,745	497,615	1,616,157	1918
1919	29,628	339,817	369,445	100,551	199,993	4,493	346,639	372,035	1,393,156	1919
1920	44,598	306,807	351,405	118,301	120,033	2,395	520,856	84,626	1,187,616	1920
1921	35,900	128,014	163,914	49,752	124,348	1,220	192,906	71,408	603,548	1921
1922	48,744	250,870	299,614	39,596	109,276	1,657	581,979	258,204	1,290,326	1922
1923	29,423	305,224	334,647	27,142	119,141	1,760	440,932	418,055	1,341,677	1923
1924	36,200	333,403	369,603	27,456	119,989	1,811	657,538	568,916	1,745,313	1924
1925	31,523	361,120	392,643	73,499	199,180	1,996	445,400	607,904	1,720,622	1925
1926	83,589	253,406	336,995	69,189	181,894	2,165	772,993	701,962	2,065,198	1926
1927	57,085	250,947	308,032	58,977	181,968	1,746	247,617	562,109	1,360,449	1927
1928	26,530	177,011	203,541	18,856	156,757	865	792,362	863,256	2,035,637	1928
1929	60,407	220,899	281,306	19,377	196,444	672	477,969	424,982	1,400,750	1929
1930	107,896	369,782	477,678	38,804	190,594	1,656	1,111,937	401,114	2,221,783	1930
1931	54,688	236,776	291,464	27,147	102,175	1,326	206,995	55,997	685,104	1931
1932	83,447	200,908	284,355	76,060	188,971	1,168	223,716	306,761	1,081,031	1932
1933	53,481	204,626	258,107	20,266	159,052	1,459	532,558	293,630	1,265,072	1933
1934	145,579	232,303	377,882	29,784	225,430	1,282	435,364	513,184	1,582,926	1934
1935	76,415	274,029	350,444	21,920	231,492	596	514,966	409,604	1,529,022	1935
1936	165,651	249,373	415,024	29,854	246,061	1,068	591,532	597,487	1,881,026	1936
1937	103,137	222,637	325,774	16,171	133,208	844	585,576	447,602	1,509,175	1937
1938	186,794	260,659	447,453	15,531	301,123	1,035	400,876	541,812	1,707,830	1938
1939	73,216	196,672	269,888	16,103	245,096	797	620,602	386,584	1,539,070	1939
1940	86,215	280,188	366,403	17,741	224,524	1,205	213,911	643,443	1,467,227	1940
1941	149,715	305,582	455,297	50,476	391,407	3,454	427,766	920,470	2,248,870	1941
1942	418,491	248,080	666,571	24,745	211,139	4,649	270,622	633,834	1,811,560	1942
1943	72,507	92,382	164,889	10,658	186,042	3,095	530,188	363,348	1,258,221	1943
1944	107,431	140,283	247,714	19,362	183,546	3,926	389,692	255,316	1,097,557	1944
1945	122,384	205,617	329,001	12,800	218,887	2,922	825,512	350,188	1,739,311	1945
1946	381,580	161,447	543,027	8,100	100,154	4,115	116,607	576,133	1,348,138	1946
1947*	91,238	195,259	286,497	10,017	146,293	3,268	600,787	486,615	1,533,478	1947
1948	83,986	176,656	260,642	16,438	207,116	5,665	321,721	496,553	1,308,137	1948
1949	116,171	143,649	259,821	21,163	215,376	2,374	709,992	227,737	1,436,464	1949
1950	239,333	168,708	408,041	9,133	116,642	3,243	446,516	498,984	1,482,560	1950
1951	260,258	168,041	428,299	13,698	312,845	3,656	736,093	461,806	1,956,397	1951
1952	213,408	235,766	449,174	9,064	64,095	3,752	675,836	91,514	1,293,435	1952
1953	175,000	335,100	510,100	12,177	110,170	2,724	793,382	392,716	1,821,269	1953
10 YEAR AVER.	179,079	193,053	372,232	13,189	167,512	3,292	561,614	383,756	1,502,676	10 YEAR AVER.

NOTE:– Figures for 1925 to 1951 have been corrected from official statistics. Figures for 1953 are subject to further correction. Figures for "Fraser River Sockeyes" include all Sockeyes canned in District No. 1, regardless where caught.

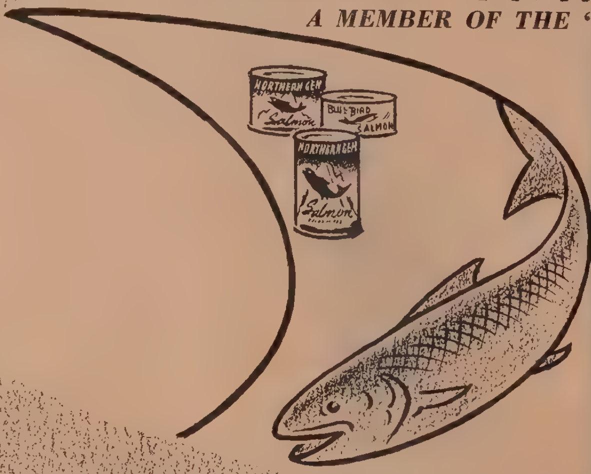
*Figures for 1947 include 28,321 cases packed from frozen fish of 1946 catch of various species.

ing the season that the Hell's Gate fishway is proving as helpful to the Pinks as well as to the Sockeyes, and observers counted Pinks in spawning areas that had been barren of them since the century's first decade.

Pink Run Phenomenal

The run of Pinks through Johnstone Strait during the latter part of August was almost without precedent. Although fishing was restricted to four days of the week, more than a million Pinks were caught. There was never before such an assemblage of fishing craft to participate in that single harvest—291 seiners and 375 gillnetters. For those who took part in the operation it was something to be remembered for a long time.

Comparatively few new boats were added to the fishing fleet during the year, partly because of the rising cost of construction, and it was perhaps symbolic of the times that the biggest single order for fishing vessels to be handled by a boatyard during the period was for delivery in Ceylon as part of Canada's contribution to an Asiatic rehabilitation plan.



FARWEST FISHERMEN, INC.
A MEMBER OF THE "WHITNEY" FAMILY

ANACORTES, WASH.

BRANDS

BLUE BIRD
Fancy Puget Sound Sockeye

BEST RED
Fancy Alaska Sockeye

NORTHERN GEM
Puget Sound & Alaska Chum

FARBEST
Ocean Caught Cohoe

RED ROSE
Puget Sound Cohoe

SEA RUN & SEA LASSIE
Puget Sound & Alaska Pink

FARBEST by FARWEST

Exporters *Importers*
Accredited Purchase & Sales Agents
Canned Goods

CALKINS & BURKE
LIMITED

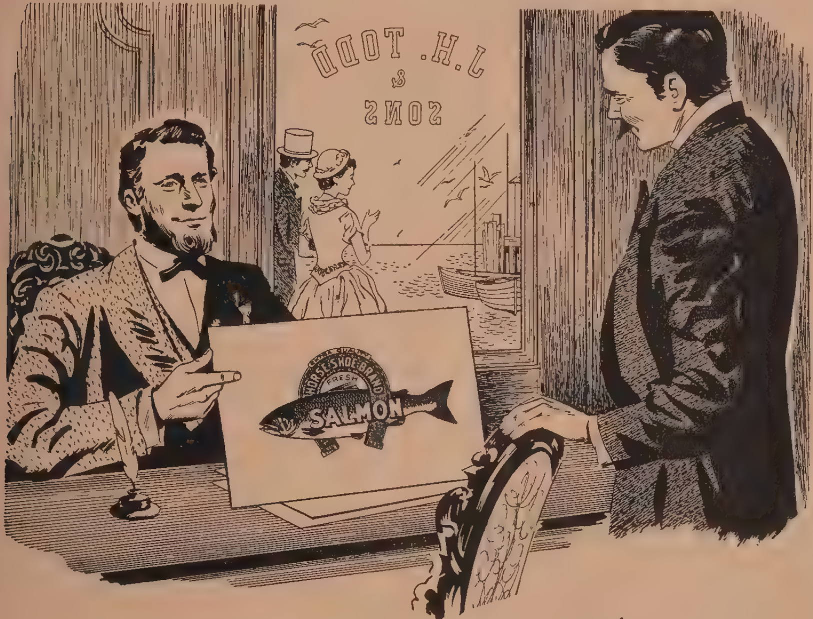
402 Pender Street West Vancouver, Canada
Cable Address "Kincal"

Fraser River Sockeye Salmon Catch by Cycles

	Year	Catch	Year	Catch	Year	Catch	Year	Catch	
British Columbia	1939—	568,943	1940—	937,062	1941—	2,116,723	1942—	5,047,599	British Columbia
Washington		552,179		709,661		1,560,482		2,921,805	Washington
TOTAL		1,121,122		1,646,703		3,677,205		7,969,404	TOTAL
British Columbia	1943—	349,011	1944—	1,003,829	1945—	969,444	1946—	4,239,622	British Columbia
Washington		242,822		436,182		716,685		3,551,761	Washington
TOTAL		591,404		1,440,011		1,686,129		7,791,383	TOTAL
British Columbia	1947—	354,000	1948—	751,812	1949—	1,020,799	1950—	894,469	British Columbia
Washington		90,117		1,089,060		1,058,117		1,220,935	Washington
TOTAL		444,117		1,840,872		2,078,916		2,115,404	TOTAL
British Columbia	1951—	1,288,162	1952—	1,154,383	1953*—	1,988,000			British Columbia
Washington		1,136,791		1,113,475		2,032,000			Washington
TOTAL		2,424,953		2,267,858		4,020,000			TOTAL

*Figures for 1953 are preliminary.

Figures in this table, taken from reports of the International Pacific Salmon Fisheries Commission, represent the actual numbers of Sockeye known to have been caught in waters covered by the Fraser River Sockeye Salmon treaty. Reliable catch statistics for years prior to 1939 are not available.



"We'll use this Trademark"

. . . SAID MR. TODD IN 1882

72 years ago, at the height of Queen Victoria's reign, Mr. J. H. Todd, founder of the firm of J. H. Todd & Sons, selected the first salmon brand registered in Canada—a "horseshoe" surmounting a salmon. Henceforward this mark was to distinguish the very finest red sockeye salmon packed on Canada's Pacific coast. Even to this day it has never varied.

To buyers in all parts of the world, the name "Todd's" is a symbol of dependability. We aim to keep it so.

J. H. TODD & SONS LTD.
VICTORIA B.C., CANADA

CANADA
TODD'S
HORSESHOE
FANCY RED SOCKEYE
SALMON

AND STILL CANADA'S FINEST SALMON

Babine Sockeyes Saved

The program of fishery rehabilitation continued through the year. Perhaps the most significant and certainly the biggest project of this kind was on the Babine River, tributary of the Skeena, scene in 1951 of a slide that at the time seemed to have disaster potential comparable in its way with the historic rockslide at Hell's Gate in 1913. Prompt rehabilitation measures adopted by the Canadian fisheries department, however, resulted in clearing the slide area by early 1953 so that Sockeye were able to enter the spawning grounds unobstructed. Unlike the Hell's Gate situation, no fishway construction was necessary.

Increasing use of nylon nets imposed a new problem for the industry since the intensive use of this type of gear might achieve such high efficiency that the whole system of regulation might have to be revised accordingly. However, it was too early to reach definite conclusions. During the coming months fisheries officials planned to study the effect of nylon nets with a view to possible changes in conservation measures.

Fancy Sockeyes Weak As 1953 Runs Out

"We're not worrying about Pinks; the red fish are our problem," remarked one prominent operator at the close of the season. He was referring, of course, to the half million case pack of Sockeyes plus carryover from the 1952 Sockeye pack — top quality fish that couldn't be sacrificed without the packers pocketing a heavy loss. It seemed strangely ironic that Sockeye, the prize product of British Columbia's fishery, should be the drug on the market. Invariably the big demand had always been for Sockeye first; in the old days, other grades were virtually ignored. Yet in 1953 there was just too much Sockeye, and in November, as a result, there was an $8 spread per case on Sockeye between the prices quoted by various packers. One major producer reduced the price of fancy Sockeye $3 a case early in November to stimulate sales, and most of the others followed suit.

GAVIN BROS., INC.

Distributors

CANNED SALMON

"Gavin's"— Alaska Red Sockeye
"Peter Puget"— Fancy Puget Sound Sockeye & Blueback
"Dainty Miss"— Fancy Spring Pack Chinook
"Challenger"— Medium Red
"Swift Sure"— Fancy Silver
"All Sea"— Fancy Coho
"Sea Ranger"— Pink
"Gavin's"— Pink
"Sea Leader"— Chum

CANNED CLAMS • CANNED TUNA

CANNED CRAB MEAT

Colman Building Seattle 4

PACIFIC 3361

BB

The Best in Lithography and Printing

BULMAN BROTHERS

B.C. LITHOGRAPHING & PRINTING LTD.
901 HOMER STREET

901 HOMER STREET
VANCOUVER, B.C.

Birks-Crawford
Limited
VANCOUVER - CANADA

COMMISSION AGENTS

Importers and Exporters

PACIFIC COAST FISH PRODUCTS

Cable Address — BIRCRAW — All Codes

BARBEY PACKING CORPORATION

FANCY — CANNERS — FANCY

Columbia River Chinook Salmon ASTORIA, OREGON **White Meat Albacore Tuna**

WILLIAM A. MANN & SONS

313 CONGRESS ST.
BOSTON, MASS.

Our 51st anniversary specializing in New England on sales of SALMON and other domestic and foreign SEA FOODS

Stimulus of short supply fails to lift prices and increase demand volume in canned salmon selling of 1953. Prices generally are lower, despite smaller pack; perhaps due to cheaper meats.

This condition prevailed in the face of virtual certainty of another below-normal pack in 1954.

SELLERS of salmon found themselves confronted by a peculiar condition throughout much of 1953—a condition which continued into 1954 with gradually increasing emphasis.

This problem was termed by some sellers as "a reversal of the law of supply and demand".

It boiled down to this: despite another year of short supply, and actually one of the shortest ever, the demand for canned salmon was laggy.

This weakness was manifest in volume of business moving, as well as in the price required to induce movement; and in spite of a market development and trade promotion program.

Scant Pack Sure in 1954

Various reasons were advanced, but the reduced price of meat appears to have had a lot to do with it.

That was the way it looked to a lot of canned salmon sellers as they entered 1954, a year when condition of the runs, degree of preparations, and restrictive regulations left no alternative but to anticipate another short, **very** short, salmon pack.

Red talls provided the principal salmon selling feature of the first half of 1953. The year opened—as 1952 had closed—with a spread of $3 between the "list" price of the principal advertised brand sellers, who quoted $30, and the going price of $27 which had been asked since early summer for all except the handful of "big name" brands.

The lower figure drew steady business, and volume available at that price was undoubtedly aug-

TALBOTT CARROLL CO., INC.

HULLS • CARGO • FIRE • LIABILITY

Insurers for the

FISHING INDUSTRY

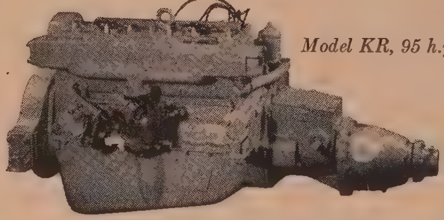
For thirty years our office has specialized in the insurance requirements of a great industry. From the small troller to the large freezer ships—from the small canner to the volume packers of fish products —our service has been recognized by their continued patronage.

COLMAN BUILDING ELiot 6400 SEATTLE 4, WASH.

ENGINES *FOR EVERY* USE

YOUR ASSURANCE OF DEPENDABLE PERFORMANCE WHEN POWERED BY CHRIS-CRAFT

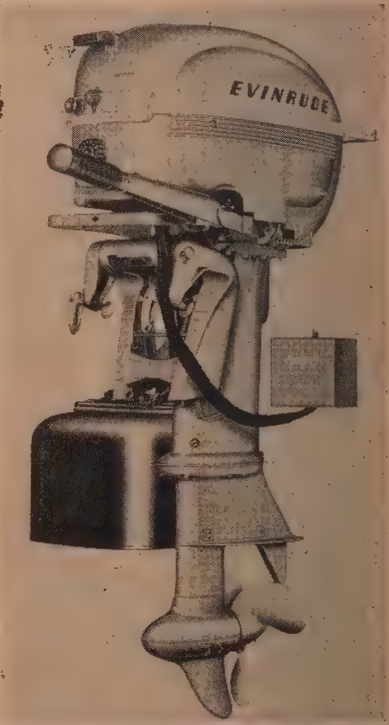
THE WORLD'S BEST BUY IN MARINE ENGINES



Model KR, 95 h.p.

CHRIS-CRAFT powered boats start and operate efficiently under all conditions. Their simplicity facilitates easy maintenance. For either commercial or pleasure use, CHRIS-CRAFT is the world's best engine buy. Available in a wide range of horsepowers, with reduction gears of various ratios in most models.

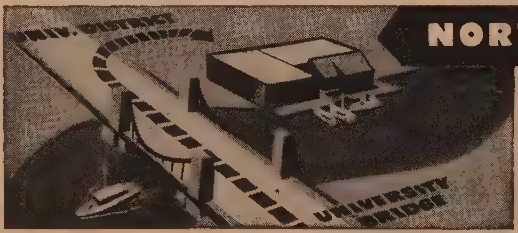
EVINRUDE OUTBOARDS FOR DEPENDABILITY!



PROVED PERFORMANCE! No "maybe" when it comes to picking the power plant for husky work boats. The Evinrude 25 H.P. Big Twin has conclusively proved its advantages over conventional engine installations of the same rated horsepower. Higher speed, light or loaded. Greater maneuverability. Important space saving. Easy beaching. *Far lower cost*—as much as $900 *less* than the conventional installations.

With *performance,* an Evinrude gives you stamina and low upkeep you couldn't beat in any type of motor. A complete line, 3 to 25 H.P., to meet the widest range of work boat needs.

3 h.p Lightwin	**$151.00**	**15 h.p. Super Fastwin**	**$349.00**
7.5 h.p Fleetwin	**243.00**	**25 h.p. Big Twin**	**430.00**
25 h.p. Electric Starting Big Twin	**$521.00**		



NORTH END UNIVERSITY BRIDGE

BRYANT'S marina

in SEATTLE
1117 E. Northlake
MElrose 6900

in SPOKANE
Center of Division Street Bridge
Riverside 6338

mented by unlabelled goods from the stocks of featured-brand sellers.

Come late spring and the $30 price was scaled, first to $28 and then to $27. This action doubtless was taken in anticipation of a big pack on Bristol Bay in 1953—an anticipation which proved as wrong as wrong can be.

Nevertheless, when 1953 Reds did appear in pitifully small volume as against expectations, the price remained at $27.

Pinks and Chums Sell On Price Spread Basis

Marketing experience with the 1952 canned salmon pack convinced a good many packers and brokers that pricing which would project into a retail price of around 49c on Pink talls and 39c on Chums served to stimulate movement of these grades.

This conviction, born of effective selling on the 1952 pack, was projected into action in the fall of 1953 on the Pinks and Chums produced in that season. Free and early sellers of Pinks pegged their prices at $18 and $16 in September, 1953, and turned a lot of business in a very short time—particularly on pinks.

True enough, the $2 spread between Pinks and Chums reacted more favorably on Pinks, with the result that well before the end of 1953 the price of "summer" Chums had been revised downward to $14. The wider spread supplied the stimulus sought for Chums, but this variety continued to suffer somewhat from the usual burden of "fall" Chums, priced at $13.50. Actually, some sellers of 1953 Chums split this grade into three sub-grades—"Fancy", "Standard" and "Fall". It must be acknowledged that this practice did not develop widely.

Consignments and Imports

Ever-recurrent practice of consigning stocks of salmon cropped-up during the fall of 1953 about as widely as ever, and with a reported variety of pricing, billing, paying and protection conditions which seemed more broadly variable than in previous seasons.

Imported salmon, principally Pinks, came from Canadian sources in the spring of 1953 to bolster the light supply of this grade. Imports from 1952 packing aggregated about 350,000 cases, and forecasts as 1954 opened indicated that the 1953-4 selling year would see an equal volume of Canadian salmon offered on the United States market.

Smaller Can Use Grows

Use of slightly smaller cans made some further advance in the salmon industry in 1953, notably as result of the packing of Cook Inlet Sockeyes in "tuna-size" halves by Emard Packing Co.; and the canning of a limited quantity of Puget Sound Pinks and Cohoes in 12-oz. talls by the Fishermen's Packing Corporation.

In the case of canned crab, the "tuna-size" half has become virtually standard among the larger lackers, but expect that within a year or so it will account for the entire pack of this particular product.

INITIAL PRICES FOR CANNED SALMON

(Per case of 48 cans. Prices in dollars and decimals)

YEAR	Chinook Columbia Riv. Fancy	Sockeye Puget Sound	Red Alaska		King Alaska	Coho — Medium Red		Pink		Chum	
	Halves	Halves	Talls	Halves	Talls	Talls	Halves	Talls	Halves	Talls	Halves
1910	$4.4	$4.4	$5.4	$4.	$5.4	$5.	$3.2	$3.2	...	$3.1	...
1911	5.2	5.2	6.4	4.5	7.2	5.8	4.	4.	$3.2	3.8	$3.
1912	5.	5.2	5.6	4.6	5.6	4.6	3.2	2.6	2.2	2.5	2.
1913	5.	4.2	4.6	3.8	4.	3.4	2.8	2.6	2.2	2.2	2.
1914	5.	5.4	5.8	4.4	5.6	4.6	3.3	3.6	2.8	3.4	2.6
1915	5.	5.4	6.	4.6	5.	4.6	3.	3.	2.3	2.8	2.1
1916	5.	5.6	6.	4.8	5.4	5.2	3.6	3.6	3.	3.4	2.7
1917	7.	7.	9.4	6.6	9.	8.	5.4	6.6	4.6	6.4	...
1918	8.	8.	9.4	6.6	9.	9.6- 9.	6.4	6.6	4.6	7. - 6.4	4.4
1919	8.	10.	13.	9.	12.5	12.	8.	9.	5.6	8.6	5.
1920	10.	12.	13.	9.	12.	8.	6.	6.	4.4	4.6	3.6
1921	8.4	10.	9.4	8.	7.	6.	3.8	4.4	3.2	4.	2.6
1922	13.	10.	9.	7.	7.	5.	4.	4.6	3.2	4.2	2.8
1923	10.	10.	9.	6.6	8.	5.6	4.	5.	3.6	4.8	3.4
1924	8.8	9.	9. -10.	6. - 7.	8.6 - 8.4	7. - 6.	5.4- 4.2	5.2- 5.	3.6	4.8	3.4
1925	8.4	9.4 -10.	14.	9.	13. -12.	11. -10.	7.4- 7.	5.8- 5.	4. - 4.4	4.6- 4.4	3.6- 3.4
1926	9.4	10.	10.	8.	9.	9.	6.	5.4	4.2	5.	3.6- 3.2
1927	9.4	11.	12.4	9. - 8.6	11.4 -10.6	10. - 9.	6.6- 6.	6. - 5.4	4.6- 4.4	5.4- 5.2	3.8
1928	9.8	10.4	9.4	7.4	8.6 - 8.	7.4- 7.	5.4	6.6	4.4	6.4	4.
1929	10.4-10.	10.	10.6	8.	9.	8. - 7.4	5.6- 5.4	6.	4.4	5.4	4.
1930	10.	8.	12.4	8.	10.6	9.	5.6	4.	3.	3.6	2.8
1931	8.	8.	9.4	6.6	7.	7. - 6.4	4.8- 4.6	3.4	2.8	3.2	2.6
1932	6.	6. - 5.	5.8- 5.	4.	4.4	4.	3.2- 3.	3.4- 3.	2.4	3. - 2.8	...
1933	7.6- 7.	7. - 6.6	7. - 6.6	4.8	6.	5.4	...	4.8	3.	4.6	2.8
1934	7.2	5.4	6.8- 6.4	4.8- 5.	5.4	5.	4. - 3.8	4.2- 4.	3.2	4. - 3.8	3.
1935	7.2- 7.	7.	9.4- 9.	6.6- 6.4	8. - 7.	6.6	4.4	4.2- 4.	3.2	4. - 3.8	3.
1936	8.	7.	8. - 7.6	6.	7.	6.6- 6.4	4.4	4.	3.4- 3.	3.7- 3.6	3. - 2.8
1937	8.4	8.4	10.	6.8	9.	8.	5.	5.	3.4	4.8	3.2
1938	9.2- 8.4	7.	7.8- 7.4	5.6	7.6 - 6.8	6.4	5.	4.	3.	3.8- 3.6	2.8
1939	9.2- 8.6	8.	9. - 8.6	6.7- 6.4	8.4	7. - 6.4	5. - 4.8	5.2- 5.	3.6- 3.4	4.6	3.2
1940	9.	8.4	9.6	6.6	9.2	7.4	4.8	5.4	3.8	4.8	3.4
1941	10.4	10.	13.6-13.4	8.2	12.	...	7.	7.	4.8- 4.4	6.8	4.6- 4.2
1942	13.	11.4	15.	10.	...	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1943	13.	11.4	15.	10.	14.	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1944	13.	11.4	15.	10.	14.	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1945	13.	11.4	15.	10.	14.	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1946	18.5	19.	22. -20.	16.5-13.4	20.	17. -16.	11.6	12.	8.4	11.6- 9.4	8.
1947	20. -19.	22. -19.	24.5-22.6	17.5-16.	22. -21.4	22.	15.4-15.	19. -17.2	13.5-11.5	18.5-16.5	12.5-11.1
1948	23.5-22.	22.	27. -26.	19. -18.	26. -24.	25.	17.5-15.	23. -22.	15. -13.	20. -22.	13.5-12.
1949	20. -18.	...	26.5-25.	16. -15.	24. -22.	22. -21.	12.5	16.	10.	15.	9.5- 9.
1950	19. -21.	19. -20.	28. -29.	18.	23.	19. -22.	15.5	22. -24.	15.	20. -21.1	12.
1951	21. -23.	19. -21.	29. -31.	18.	26.	25.	15.	21.	12.5	18.	11.
1952	22. -23.	20. -19.	27. -30.	17. 5-18.	25.	21. -22.	12. -13.	18. -20.	12.	16.	9.
1953	20. -21.	18. 5-17. 5	27.	17.	24.	20.	12.	18.	10. 2-10. 5	14.	8. -8. 5

NOTE: The title of this tabulation has been changed from "OPENING PRICES" to "INITIAL PRICES," and the prices of pre-war years — originally quoted per dozen each are converted to the per case basis which is now in general use.

The prices are quoted in dollars and decimals thereof, rather than in dollars and cents; and are based largely on formal "opening prices" announced as such by leading sellers, they are not limited exclusively to such quotations. The formal "opening prices" of different concerns are often incomplete, and vary so widely that a full presentation of them might be confusing. The purpose of this tabulation is to present comprehensively for each year the earliest prices at which substantial quantities of the pack were sold.

The prices here quoted for the war years are the "ceilings" established by the government. Those for 1946 are the prices announced by the majority of large packers after "de-control."

EXPORTS OF BRITISH COLUMBIA CANNED SALMON

YEAR	Unit	To United Kingdom		To All Countries	
		Quantity	Value	Quantity	Value
1933	Cases	225,508	$ 2,255,080	1,173,574	$9,244,557
1934	"	304,313	3,490,470	1,036,401	8,419,896
1935	"	412,333	4,387,222	1,205,427	9,347,379
1936	"	389,358	3,597,649	1,385,956	10,478,418
1937	"	393,458	3,798,818	1,165,184	7,518,120
1938	"	342,640	3,726,527	972,630	7,111,140
1939	Cwt.	48,104	768,636	104,150	1,347,796
1940	"	41,172	665,833	113,289	1,504,917
1941	"	369	10,288	77,478	1,095,282
1942	"	738,518	13,860,849	776,382	14,424,678
1943	"	555,922	11,605,958	591,243	12,110,563
1944	"	512,445	10,664,747	540,039	11,065,864
1945	"	398,532	9,447,916	596,140	11,789,788
1946	"	444,823	11,742,701	479,021	12,330,780
1947	"	185,088	4,482,175	368,143	9,759,051
1948	"	47,711	1,590,962	275,724	8,933,240
1949	"	229,903	7,081,556	414,259	11,923,924
1950	"	126,029	4,645,680	330,176	10,246,436
1951	"	166,197	6,542,185	321,796	11,550,633
1952	"	12,208	386,752	292,185	8,140,129
1953*	"	127,801	4,311,050	415,397	12,478,213

SOURCE: Victoria, B.C., Bureau of Economics and Statistics, External Trade Division. *First ten months only.

ADELMAN
MACHINERY COMPANY
520 FIRST AVE. S. - SEATTLE 4 - MAin 7667

FISH ELEVATORS
AND CONVEYORS
All Types and Sizes

FISH CLEANING TABLES
SLIMING TABLES

POWER TRANSMISSION — SCREW CONVEYORS

FOODS
CANNED
FROZEN
DRIED
SPECIALTIES
ALWAYS A GOOD RULE
CALL
SUGAR
SYRUP
CONFECTIONS
HOUSEHOLD
SUPPLIES

Meinrath Brokerage Company
Incorporated
Kansas City — Wichita — Omaha — Chicago — Minneapolis — Milwaukee

E. H. HAMLIN ASSOCIATES
BROKERS - EXPORTERS
CANNED SEAFOODS
Established 1912
Mutual Life Bldg., Mutual 1070, SEATTLE 4, U.S.A.

Murray-Latta Machine Co., Ltd.
Manufacturers of
FISH CANNING MACHINERY
311 West 2nd Avenue VANCOUVER, CANADA

SIMPSON, ROBERTS & CO., LTD.
46 STANLEY STREET, LIVERPOOL, ENGLAND
Also London, Eng., Manchester, Eng., Shediac, N.B., etc. etc.
PROPRIETORS OF
"PRINCES" BRAND

C. F. BUELOW
COMPANY
INC.
Distributors
Alaska and
Puget Sound
Canned
Salmon
Crab Meat
and Northwest Tuna
Main 4464
Smith Tower, Seattle 4, Wash.

SPOT LITE
ALASKA
SALMON

POWELL & RUSSELL
525 Seymour St.
Vancouver 2, Canada
CANNED SALMON & HERRINGS
Established 1932 ● Cables: POWRUS

Atwood Adhesives, Inc.
Manufacturers of
Modern Labeling and Sealing
Adhesives
1000 8th Ave. So. Se. 0762
Seattle 4, Wash.

A. H. MORSE CO.
BROKERS
Canned Goods — Frozen Foods
New England Coverage
9 India Street Boston 9, Mass.

FOLEY BROKERAGE CO.
5814 Excelsior Blvd., Minneapolis 16, Minn.
Established 1936
Strictly Brokerage: *Specialize* in All Grocery and Confectionery Lines: Carry Consigned Stocks.
Territory covered: Minnesota, North and South Dakota and Western Wisconsin.

FIST BROKERAGE CO.
Complete Coverage of Twin City
Trading Area for 40 Years
Canned Goods — Specialties — Frozen Foods
4526 Excelsior Blvd., MINNEAPOLIS 16, Minn.

NATIONAL FOOD BROKERS ASSOCIATION
PAUL PAVER
& ASSOCIATES
500 NORTH DEARBORN
CHICAGO 10, ILL.
Food Brokers serving
CHICAGO
Nor. Illinois — Nor. Indiana

MARKETS
SALMON

Continued curtailment of overseas markets imposed continuing serious market problems on the British Columbia salmon industry in 1953, another year of large production, plus substantial carryover. Development of North American trade carried encouragement for the industry as it entered 1954.

CONTINUED contraction of overseas markets because of currency and other economic difficulties continued as a major problem for British Columbia salmon canners through 1953, but the year was not as crowded with complications as was 1952, when labor troubles and unsold carryovers of staggering proportions harassed the industry.

Although there was much room for improvement, the overall feeling of the canners marketwise at the close of the 1953 season was optimistic. There seemed to be good reason to expect that Canada's domestic consumption of canned salmon would attain an all-time high; the important United Kingdom market prospects seemed definitely brighter; and there was a better chance than usual of selling substantial quantities of canned salmon, especially Pinks, in the United States. There was nothing in the sales picture to justify celebration, but there were solid grounds for the belief that from now on conditions might get better.

The big 1953 pack — more than 1,800,000 cases — was a mixed blessing. It was larger than anyone had predicted, and extremely bountiful in both Sockeyes and Pinks. Conditions being what they were, the reaction of the packer as he saw the pack figures mounting from week to week was a realization that selling would be just that much tougher. They were prepared to give it that effort, and before the end of 1953 aggressive selling was paying off in orders.

Whether Canada would be able to absorb more than 900,000 cases of canned salmon in a single year was yet to be determined. It had never been done before, but the industry, continuing its cooperative advertising and sales promotion campaign in modified form throughout the provinces, felt that if that record could be broken it would be on sales from the 1953 pack.

Carryover Greatly Reduced

The packers were no longer confronted with the depressing fact that more than 600,000 cases of salmon remained unsold from the previous season, which was their predicament in 1952. By the time the 1953 pack came on the market, the carryover had been whittled down to about 260,000 cases. While that was too big for comfort in a year when production was exceptionally high, it wasn't big enough to cause serious anxiety.

More British Business Sought

In the spring of 1953 the British indicated their intentions were good by placing an order for about 205,000 cases, valued at some $4,500,000. A rough breakdown of the grades taken: 60,000 cases Sockeye, 59,500 Coho, 85,000 Pinks. In 1951, the British had bought 290,000 cases, representing a total return to the industry of about $7,000,000.

While the British Columbians appreciated the British order placed early in 1953, it did not convince them that it represented the full potential of that market, and for that reason a strong delegation went to the United Kingdom in the Fall, comprising H. R. MacMillan and John M. Buchanan, chairman and president respectively of B. C. Packers, and Roger T. Hager, president of the Canadian Fishing Co.

It was hoped that the missionary work performed by this delegation would be rewarded by bigger business in the early future, although there seemed little likelihood of additional orders from the United Kingdom during the calendar year 1953.

Spokesmen for the industry emphasized, however, that they had not sought a "barter deal" in any sense.

American Market Eyed

The British Columbians felt that this might be a favorable year to enter the United States market on a fairly large scale. They had never been able to do it before because of the 25% ad valorem duty, and even when that rate was slashed to 15% sales continued negligible, but the low production of Pinks in Alaska encouraged the Canadians to believe that they might be able to sell 300,000 or 400,000 cases of canned Pinks in the United States early in 1954.

BRITISH COLUMBIA CANNED SALMON PRICES

YEAR	SOCKEYE			COHO, SPRING, BLUEBACK			PINK			CHUM	
	1-lb. Talls or Flats 48's	½-lb. Flats 96's	¼-lb. Flats 96's	1-lb. Talls or Flats 48's	½-lb. Flats 96's	¼-lb. Flats 96's	1-lb. Talls or Flats 48's	½-lb. Flats 96's	¼-lb. Flats 96's	1-lb. Talls or Flats 48's	½-lb. Flats 96's
1942-4 b	$16.25	$17.50	$10.50	$11.50	$12.75	$ 8.12½	$ 6.25	$ 7.50	$ 5.00	$ 6.25	$ 7.50
1945-6 b	17.65	18.90	11.20	12.90	14.15	8.82½	7.65	8.90	5.70	7.65	8.90
1946 c	18.90	20.30	....	13.90	15.25	.....	8.30	9.70	....	8.30	9.70
1947	23.50	25.00	15.00	20.00	21.50	13.00	12.50	14.50	.....	12.00	13.50
1948	28.50	30.00	17.50	24.50	26.00	15.25	16.50	18.00	.....	15.00	16.50
1949	31.50	33.00	19.00	23.50	25.00	15.00	16.50	18.00	.....	12.50	14.00
1950	31.50	33.00	19.25	23.50	25.00	15.00	17.50	19.00	12.00	14.00	14.00
1951	36.00	38.00	21.50	27.50	29.00	17.00	19.00	20.50	12.75	16.50	18.00
1952	31.50	33.00	19.00	20.50	22.00	13.50	15.00	16.50	10.75	13.00	14.50
1953	28.50	30.00	17.50	20.50	22 00	13.50	15.00	16 50	10 75	13 00	14.50

NOTE: Quotations for 1948 and 1947 packs represent packers' opening prices to the domestic market. Prices received for 1950 sales under the contract to the United Kingdom were considerably less than those quoted.

Prices marked "c" were established by the Canadian government in December, 1946, for sales to the domestic trade, but are also roughly equivalent to those received for export to the United Kingdom, etc. Prices marked "b" were those paid by the British Ministry of Food in 1945-46 and 1942 to 1944.

JOHN L. FARLEY
Washington, D.C.
Director, U.S. Fish and Wildlife Service
Former Executive Officer, California
Division of Fish and Game

(Copyright Kennell-Ellis)

CHARLES P. TURNER
Seattle, Wash.
President, Northwest Salmon Canners, Assn.
Vice President, Kadiak Fisheries Co.
Vice President, Chignik Fisheries Co.

GERALD CIGLIANO
Terminal Island, Calif.
President, Pan-Pacific Fisheries, Inc.

P. E. PAULSON
Vancouver, B.C.
Managing Director, J. H. Todd & Sons, Ltd.

Pacific Fisherman's

CANNED FISH HAND-I-BOOK

SECOND EDITION

PACIFIC FISHERMAN'S

CANNED FISH HAND-I-BOOK

This booklet seeks to provide basic background information on canned fish for the use of the men who sell the product as well as for those who buy it—the broker, the jobber, the wholesaler, the retailer, and the consumer.

The Hand-i-Book seeks to be a solid, factual, compact but authoritative collection of information for the use of those in whose hands rests the task, and the privilege, of distributing fine canned fish; and at the same time to give them and their customers just a suggestion of the "color" and romance of fishing.

There is zest in fish—as well as in fishing.

Seafoods Were the First American Canned Foods

Seafoods were among the first products canned by the process of heat sterilization of food in hermetically sealed containers, invented by Nicolas Appert, a Frenchman, in the years from 1804 to 1809.

Canning came to the United States in 1819 when Ezra Daggett and Thomas Kensett started canning oysters in New York City. A year later William Underwood was canning lobster in Boston.

Large scale canning operations were not undertaken in this country until 1844, when Kensett initiated oyster canning in Baltimore in a substantial way.

As have wars since, the War Between the States sharply advanced the use of canned foods, and brought into being the first truly noteworthy pack—again a product of the sea.

This was in 1864, when George and William Hume and A. S. Hapgood started canning salmon on the Sacramento River, California.

Two years later they opened the Columbia River fishery with a cannery at Eagle Cliff. Another year, and a plant was started at New Westminster, B. C., on the Fraser River.

It was 10 years later, in 1877, that the first cannery was built on Puget Sound; and the great salmon canning industry of Alaska had its beginning at Klawock in 1878.

From that beginning the opening of the Alaska salmon fisheries spread swiftly along the territory's tortuous coastline, and within a few years men were canning salmon from the Sacramento River to Bering Sea.

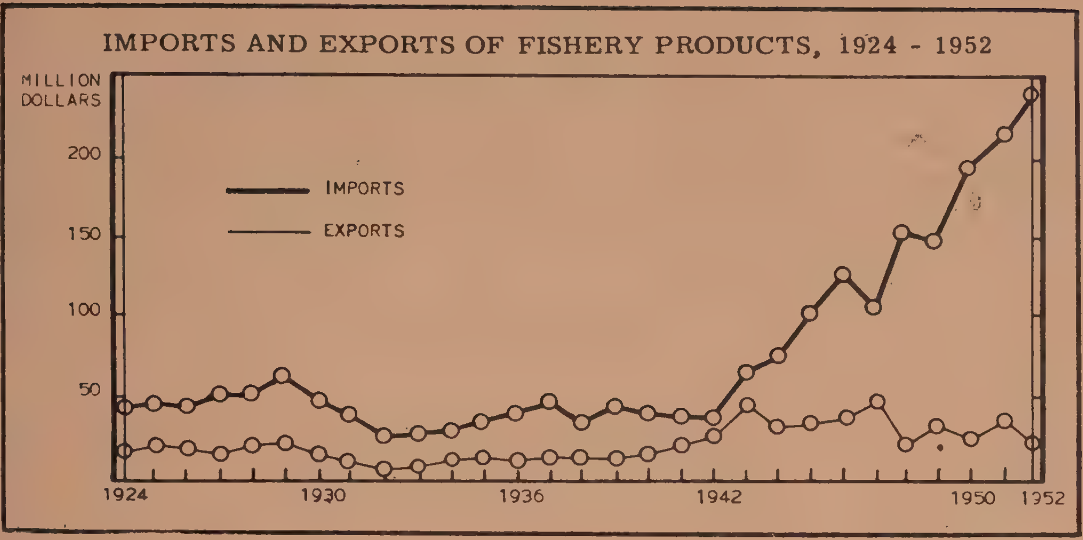
Pacific Sardine Canning Began in 1896

Sardine canning had its beginning in Maine in 1877, the year that salmon canning started on Puget Sound; but it was not until 1896 that the first successful sardine cannery in California was established at San Pedro.

Growth of California's sardine business was very slow until the First World War in 1917 developed a sudden demand which lifted sardine canning to the status of an industry.

Crab canning was undertaken in Virginia as early as 1878, but did not develop successfully because of the wide variation in quality of the pack, principally due to the tendency of discoloration to develop in the can.

Finally, in 1936 a method which effectively overcomes the problem of discoloration was developed in this country, opening the way to the growth of a successful industry.



Tuna Came Last, But Today is Largest

Tuna was the last of today's great seafoods to be canned, but its growth has been steady and astonishing from its bare beginnings 50 years ago.

Although the actual beginnings of tuna canning are misty with time, it appears that experimental packs were put up in 1903, at San Pedro. There were small packs, canned for the local trade, in the next few years, but it was not until 1909 that canned tuna was offered to the grocery trade generally. The pack in that year was 2,000 cases.

By 1912 the pack was up to 75,000 cases, and four years later it reached the half-million mark. Tuna canning achieved 1,000,000 cases for the first time in 1925, and from there has steadily increased its annual output until the United States pack exceeded 9,000,000 cases in 1952.

Canned Fish Nutritious; Caloric Value is Low

"Fish and shellfish are an economical source of protein and minerals of **relatively low caloric value.**"

"Proteins constitute 18% of fish flesh on the average. Experiments show that the nutritive value of fish proteins is equal or superior to that of beef. These proteins are more readily digestible than beef proteins, although no more completely digested. Fish protein is 85 to 95% digestible.

"Fish proteins are complete; that is, they contain the 10 essential amino acids in proportions that can be economically utilized by the body."

"Mineral matter constitutes approximately 1% of the edible part of fish, and these minerals are comparable to those in other meats, except that fish contain more iodine. In canned fish the bones are soft and may be eaten as a source of calcium and phosphorous. Shellfish are a good source of calcium and phosphorous, as well as of iron, copper and iodine."

"The fatty fish (those usually canned) contain various amounts of the fat soluble Vitamins A and D. A serving of one of the fatter fish, such as salmon, will supply from 150 to 700 international units of Vitamin A; and 50 to 200 international units of Vitamin D."

(All quotations from "Seafoods," textbook of the Meat & Dairy Hygiene School, U. S. Army Medical Service.)

Nutritional Factors

In addition to the vitamins known to occur in canned fish, there are several other factors essential in human nutrition which are found there in substantial quantities.

Iodine is a case in point. This element, with its controlling effect on goiter, is associated with most seafoods.

The proteins of canned fish are particularly notable sources of the essential amino acids. The protein of fish can be substituted weight-for-weight for that of meat or dairy products to good advantage.

Nutritionists point out that a substantial portion of the minerals in protein foods are contained in the bony structures of the animals—and that in the case of canned fish the bones are reduced by the heat of the process cook until they are entirely edible.

Fish Canners Associations

Association of Pacific Fisheries, Colman Building, Seattle 4, Wash.

Fisheries Association of British Columbia, 510 Shelly Bldg., Vancouver, B. C.

National Canners Association, Fishery Products Division, 1133 20th At. N. W., Washington, D. C.

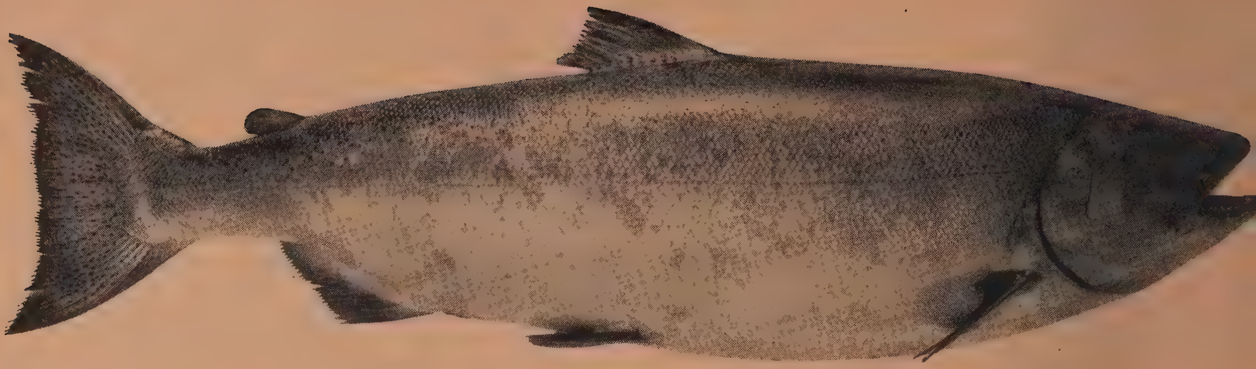
National Canners Association, Northwest Branch, Skinner Bldg., Seattle 1, Wash.

California Fish Canners Association, Ferry Bldg., Terminal Island, Calif.

Alaska Salmon Industry, Inc., 200 Colman Bldg., Seattle 4, Wash.

Tuna Research Foundation, Terminal Island, Calif.

Northwest Salmon Canners Association, Colman Bldg., Seattle 4, Wash.



CHINOOK

Called "King" in many areas, the big salmon above well deserves th name. Although he furnishes only a limited part of the canned salmo pack, this salmon is highly favored. Weight averages about 25 pounds but Chinooks above 100 pounds have been taken.

The Five Salmon

THERE are five species of Pacific salmon—Red, Pink, Silver, Chum, and Chinook.

In America they range from Monterey, Calif., northward and westerly as far as the Yukon River where it falls into Bering Sea. On the Asiatic side they are found from Kamchatka south to the west coast of Honshu, the main island of Japan.

These salmon are distinguished by the fact that they die—every one—shortly after spawning. No fish of all the millions lives to return to the sea.

Their Names, and What They Mean

Each of the five species of salmon has several names as result of varying local, geographic and commercial usage.

For example: The **Red** salmon is identical biologically with the **Sockeye** salmon of British Columbia and Puget Sound, with the **Quinault** salmon of the Washington coast and the **Blueback** of the Columbia River. The species may have local distinctions and differences as to size, color of flesh, fatness—but it is the same wherever found, and by whatever name it is known. The commonest name of the **Red** salmon comes from the fact that the body of this fish turns a brilliant red at time of spawning, the head and tail being a bright green. The fact that the flesh of this species is the brightest red of any of the salmon apparently has little or nothing to do with the name given it.

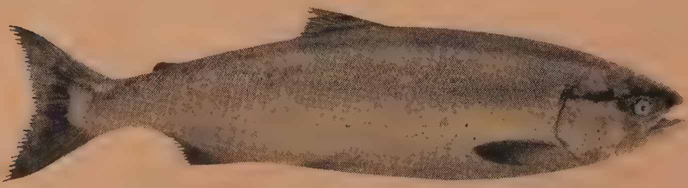
The term **Sockeye,** applied to this salmon in British Columbia and on Puget Sound, has nothing to do with its eye or eye socket; but is the Anglicized corruption of the name given it by the local Indian tribes.

The **Pink** salmon comes by his common name naturally. His flesh is Pink, in Nature, and in the can. His other name — scarcely used nowadays except by the fishermen—is easily understood when you have seen the males on the spawning grounds. One of the mysterious changes which salmon undergo as they near the spawning climax of their lives is the great hump which develops on the back of the male Pink salmon. Thus fishermen long have called this species **Humpback,** or **Humpy,** although this term is not used commercially.

Pink salmon generally develop this hump only after they have passed up the streams well above the commercial fishery, and accordingly are not canned in this condition.

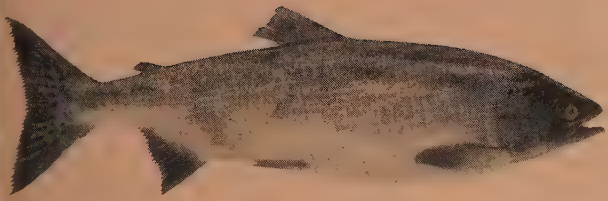
Silver salmon are usually call the **Coho** by the canner, who uses this corruption of an Indian term for a salmon whose other name—**Silver**—is highly descriptive and admirably suited to the species. However, **Silver** has little usage in the canned salmon trade, although it is favored in the fresh and frozen salmon business, where this species is particularly esteemed. Salmon sellers often give this species the name **Medium Red,** which must be accepted as satisfactorily descriptive of a fish whose flesh in the can is second only in color to that of the **Red** salmon, and medium between that fish and the **Pink.**

Chum is the only name widely given this palest species. The fishermen formerly called the **Chum** the **Dog** sal-



RED

"Sockeye" in some areas, this trim salmon averages 7 pounds weight. Yielding the Red salmon pack, it is one of the world's most important fishes.



PINK

Although the smallest of the five salmon, the Pink makes the largest contribution of all to the canned salmon pack. The species' life cycle is two years.

mon, because of the large teeth which it develops at time of spawning, but this term has largely gone out of usage, particularly in the trade.

The Indian name for the **Chum** salmon was **Keta**, and this forms the species name in its scientific nomenclature. It is used but rarely in the trade to distinguish this species.

Chinook is the name most frequently given the largest of the salmon, although the name **King** salmon which it also bears is perhaps more descriptive. The Indians also called this salmon **Tyee**, or "Great Chief," which was a well-deserved title, for the species is the largest and most widely distributed of all.

The name **Chinook** is taken from the loose federation of Indian tribes which the first White Men found in the vicinity of the Columbia River, where this salmon had its greatest concentration.

Their Habits and Fascinating Story

Salmon enter men's ken as they come to the coastline from the open sea, sometimes to feed, but particularly as they approach their maturity and begin to seek the streams where they were born, there to sow their seed in turn—and there to die.

As they approach their maturity, the salmon are at their prime, full grown and rich with the fat stored in their bodies against the long fight up the streams to the spawning gravels—for the salmon do not eat after they enter freshwater from the sea. Why this should be we do not know.

Men fish the salmon at the edges of the sea, where they are at their best.

After they have passed the nets—those that do—the salmon move up the streams, some of them for many hundred miles, until they reach the clean gravels of the higher tributaries, the very creeks in which they themselves were born.

In these high tributaries the salmon pair-off, two-by-two, and dig shallow basins or nests in the gravel. There the eggs are laid and fertilized, and then covered again with gravel to protect them from predatory enemies.

This done, the parent salmon begin to die, and in a few days are gone.

The eggs, buried in the gravel through which runs icy water through the winter months, develop gradually, and in the spring the tiny fish appear, working their way up through the gravel and into the free life of the stream. Some species, notably the **Pink**, pass almost immediately to sea. Others grow in the stream for a few months before they migrate to the ocean; but the Red salmon seeks a lake—which is always nearby, for **Reds** spawn only in streams flowing to or from large, deep lakes. The rearing period of the **Reds** in the lake lasts a year, or sometimes two, depending upon the habits of the different local races, and then he follows his fellows of the other species to the sea.

Little is known of the ocean life of the salmon. Some of them seem to feed and grow along the coast, but fish have been tagged many hundreds of miles from their parent streams; and the Japanese have successfully caught immature, feeding salmon in the North Pacific midway between Alaska and Kamchatka.

Seasons of Abundance

Although salmon may run into the streams throughout the year, the great migrations and the principal fishing seasons occur during the summer and fall months.

Commercial fishing in some **Chinook** salmon streams, notably the Columbia and the Copper Rivers, begins in May.

In June the **Red** salmon begin to appear, although the principal catches of this species occur in July.

Pinks run later, usually peaking in August.

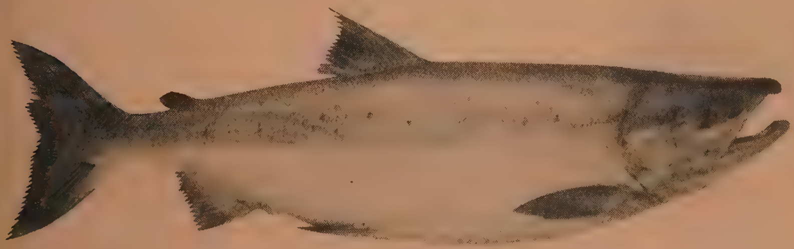
Timing of the **Chum** runs is largely a matter of geography. In Alaska the summer runs account for the large majority of the **Chum** pack, and for the best quality. Then in mid-autumn there is another run to the streams of Southeast Alaska, Puget Sound and, to some extent, the coastal streams of Washington and Oregon.

"Cycles" in Salmon

Salmon of the several species mature at different ages; and to some extent there is a range of maturity age within species.

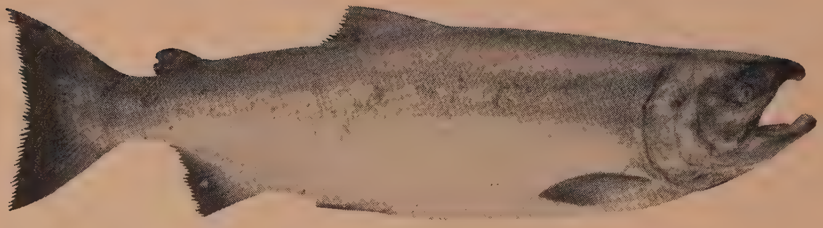
For example, Pinks are two-year fish. Salmon of this species hatched from eggs laid in 1951 return from the sea as adults in 1953, and **their** progeny will come back from the sea in 1955.

Reds **usually** are four-year fish, although it is characteristic of this species that local races may mature when five years old; and occasionally four-year and five-year races return to the same river system, greatly complicating the biological problem.



CHUM

The pale color of its flesh keeps the Chum salmon cheap, as consumer preference for color in canned salmon has powerful leverage. Although pale, although cheap, this salmon ranks on a par with the others in nutritive value.



SILVER

Commonly known as "Coho" and "Medium Red" as well as "Silver," this species averages about 8 pounds in weight. The flesh has a strong red color and the species is esteemed by the frozen trade.

The period of years from one spawning to the next is called a "cycle." Thus the cycle of 1954 in the case of the four-year Fraser River Sockeye includes the years 1942, 1946, 1950, 1954, 1958.

Strangely, as a broad, general rule, one of the four cycles usually is stronger than the others, and this dominance persists for years. Studies of the Hudson's Bay Co. records for trading posts on the Fraser, records running back into the 1820s, show that even under conditions existing before the time of the White Man one year out of the four had the best run, and that the dominance of this same cycle year has persisted for more than 100 years.

In the case of Pink Salmon, with their two-year cycle, the run of one year usually is better than the other; and this periodicity persists. In the case of the Pinks of Puget Sound, there is virtually **no** Pink run in the even-numbered years—1952-1954-1956. On the other hand, the odd-numbered years—1951-1953-1955—yield substantial runs which usually produce several hundred thousand cases of salmon from waters which the year before carried no commercial run whatever.

Why is this? Man does not know. He has tried repeatedly to establish a Pink run on Puget Sound in the even-numbered years—thus far without success, although as this is written a new attempt is being made.

Per Capita Consumption Of Canned Fish in U.S.

Edible Weights in Pounds

Year	Salmon	Sardines	Tuna	Shellfish	Other	Total
1909	1.5	.6	*	.2	.2	*
1910	1.5	.7	*	.2	.2	*
1911	1.5	.7	*	.2	.2	*
1912	1.6	.7	*	.2	.2	*
1913	1.6	.7	*	.2	.2	*
1914	1.6	.7	.2	.2	.3	3.0
1915	1.3	.6	.2	.2	.1	2.4
1916	1.2	.5	.2	.2	.1	2.2
1917	1.1	.5	.2	.2	**	2.0
1918	1.1	.5	.2	.2	*	2.0
1919	1.5	.7	.2	.2	.2	2.8
1920	1.7	.8	.2	.2	.3	3.2
1921	1.2	.5	.2	.2	.1	2.2
1922	1.7	.8	.2	.2	.3	3.2
1923	1.6	.7	.2	.2	.2	2.9
1924	1.8	.8	.2	.2	.3	3.3
1925	1.7	.8	.2	.2	.3	3.2
1926	1.8	.8	.2	.2	.4	3.4
1927	2.1	.9	.3	.2	.3	3.8
1928	2.1	.9	.3	.2	.4	3.9
1929	2.1	.9	.3	.2	.4	3.9
1930	2.0	.7	.3	.2	.1	3.3
1931	2.1	.5	.2	.2	.2	3.2
1932	2.2	.5	.2	.2	.3	3.4
1933	2.2	.8	.4	.2	.3	3.9
1934	2.3	.8	.4	.2	.5	4.2
1935	2.2	1.0	.5	.2	.8	4.7
1936	3.4	1.1	.5	.2	.6	5.8
1937	1.9	1.0	.6	.3	.4	4.2
1938	2.9	.7	.5	.2	.5	4.8
1939	2.1	1.2	.7	.2	.4	4.6
1940	1.9	.7	.7	.2	.7	4.2
1941	2.8***	.7†	.5	.2	.5	4.7
1942	1.6***	**	.4	.2	......	2.2
1943	.8	.4	.4	.2	.1	1.9
1944	.7	.9	.5	.1	.4	2.6
1945	.8	.8	.7	.1	.2	2.6
1946	1.1	1.2	.7	.2	.6	3.8
1947	1.5	.6	.9	.1	.5	3.6
1948	1.4	1.0	.9	.2	.3	3.8
1949	1.5	1.0	1.0	.2	.4	4.1
1950	1.4	1.1	1.2	.2	.4	4.3
1951	1.3	.7	1.4	.2	.6	4.2
1952	1.4	.5	1.5	.3	.5	4.2

---

*Not available.

**Less than .05 lbs.

***May be too large, no data available on defense and war takings, which had become significant by 1942.

†Assumed to be same as in 1940.

1949, 1950, 1951, 1952 figures preliminary.

Plain Facts on Condition Of the Salmon Resource

Successive years of low and declining production of canned salmon raise many questions as to the present condition and future prospects of the resource.

The subject is one about which many books could be written. Space here permits only the briefest discussion. Closely condensed, the facts are these:

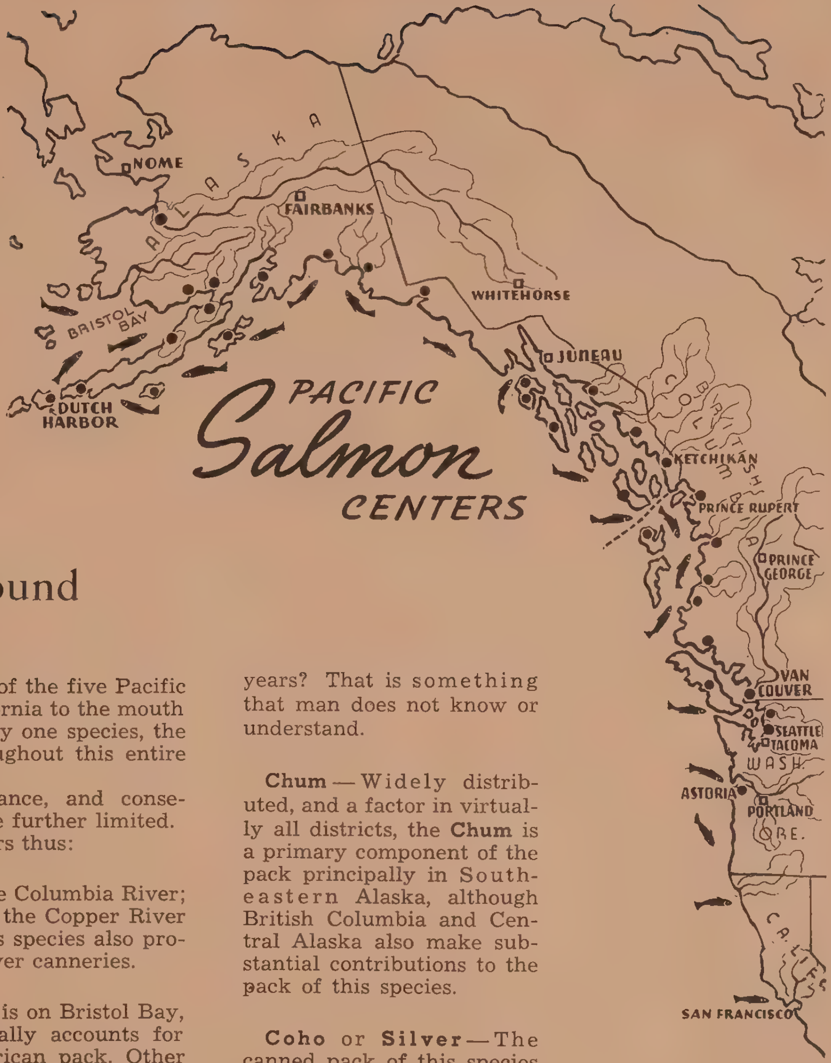
1. Salmon runs to Bristol Bay, Prince William Sound and Southeast Alaska are in serious condition; while Cook Inlet **may** be similarly affected, but to less degree. Salmon yield of the Alaska Peninsula and Kodiak Island fisheries are in good shape. Those of British Columbia and Puget Sound are in good condition, with indications of increasing yield. The Columbia River production is seriously impaired.

2. Causes are several and varied, and largely intermingled. They include: (a) Wartime disregard of conservation standards; (b) Ineffective subsequent administrative policies, particularly those which permitted (and even encouraged) the building up of excessive fishing effort; (c) Incentive for violation provided by the high prices paid for fish; (d) Natural causes affecting the productivity of spawners, particularly in the lake and ocean phases of the salmon's life, causes which seem to have produced a long cycle of reduced abundance coinciding with Man's heavy usage.

3. Corrective measures are being applied administratively, seeking increased spawning and reduced fishing effort. The industry is financing out of its own pocket a program of scientific research, seeking the natural causes which affect productivity.

4. While there is every reason to believe that the present firm and realistic approach to the problem will eventually reverse the trend of depletion and restore the salmon resource to healthy condition and full production it must be recognized that this cannot be brought abou quickly, and that the probabilities point to relativel restricted packs of Alaska salmon for several years i the future.

The Pacific salmon frequent streams of the Asiatic coast in approximately the same latitudes as those shown here on the coast of North America; although the conditions on the American continent appear more favorable, as the resource there is believed to have substantially greater volume. While salmon are found well down the California coast, there is little canning south of the Columbia River.



Where They are Found

While the extreme American range of the five Pacific salmon species runs from central California to the mouth of the Yukon River in Bering Sea, only one species, the Chinook, is found commercially throughout this entire extent of coastline.

Morover, concentrations of abundance, and consequently of canning operations, also are further limited.

Canning of the several species centers thus:

Chinook—Principal operations on the Columbia River; but with important operations also on the Copper River and Cook Inlet in Central Alaska. This species also provides the entire pack of the Yukon River canneries.

Red—Principal center of production is on Bristol Bay, in northwestern Alaska, which normally accounts for about 60% of the entire North American pack. Other notable operations are found on the Alaska peninsula, Kodiak Island, Cook Inlet, Copper River, Fraser River of British Columbia and Puget Sound.

Pink—Southeast Alaska and British Columbia account for about 60% of the normal production. Kodiak Island and Prince William Sound are also important in **Pinks;** and Puget Sound makes a substantial contribution in the odd-numbered years. Why only in the odd-numbered years? That is something that man does not know or understand.

Chum — Widely distributed, and a factor in virtually all districts, the **Chum** is a primary component of the pack principally in Southeastern Alaska, although British Columbia and Central Alaska also make substantial contributions to the pack of this species.

Coho or Silver — The canned pack of this species varies not only with the abundance of the catch but also with the location of the area with respect to transportation and the markets for fresh and frozen salmon. Where it is caught in quantity near freezing and shipping centers, the Silver salmon is used largely for those trades. The species is widely distributed and makes a significant contribution to the production of all major districts except Western Alaska.

How Salmon Is Caught

Salmon are caught by four fundamental methods—**Entanglement, Entrapment, Encirclement, Hook and Line.**

As a matter of fact, these four methods—with the single addition of **Harpooning**—include just about all of the methods used in **any** fishing.

Various factors influence the choice of method in salmon fishing: species of salmon available; period of the year; maturity of the fish sought; characteristics of the water fished; legal considerations.

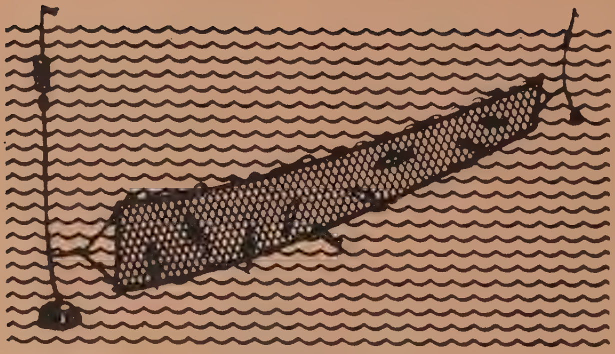
In some areas all methods are employed simultaneously.

Gillnetting—Widespread

This is the most widely-employed form of commercial fishing the world over, and is the application of the basic method of **Entanglement.**

Fundamentally, the gillnet consists of a web of netting loosely suspended in the water. Fish thrust their heads into the meshes and are caught when the swelling form of the body is held tightly in the mesh.

Salmon gillnets usually are made of fine linen or nylon twine, tied with double knots to prevent slippage, and are very strong.



Gillnetting

This net of fine flax or nylon twine is suspended vertically in the water and the fish are taken when they thrust into the meshes and cannot withdraw. This is the most widely used form of fishing gear.

Gillnets are highly "selective," in that an individual net can only catch fish of limited size range. Above that, the fish cannot get their heads far enough into the meshes to be caught; below it, they pass through. The nets are hung between a "corkline" and a "leadline," which keep them roughly vertical in the water.

Salmon gillnets usually are permitted to drift with the tide or current, the fishing boat drifting with the net; but where gillnets are anchored they are known as "setnets."

Gillnets are most effective when fished in somewhat muddy waters, and at night—as the fish then do not see the fine web in time to avoid it.

The Bristol Bay salmon catch is made entirely with gillnets, which are important also in the Cook Inlet and Copper River districts of Alaska.

This form of gear is widely employed in British Columbia in the vicinity of the great streams, such as the Skeena and Fraser.

On Puget Sound gillnetting is a minor, but growing, factor while on the Columbia River it accounts for about 90 per cent of the catch.

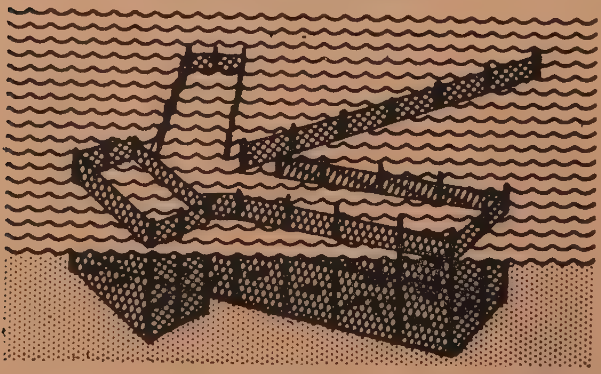
Salmon Trap is a Maze

The salmon trap is a specialized form of fishing gear employing the fundamental principle of **Entrapment.**

In essentials, the salmon trap consists of a **Lead,** which the fish follow into a series of compartments with funnel shaped openings leading finally into the **Spiller,** which is equipped for removal of the fish by a scooping process called **"brailing."**

Salmon Trap

Here the fish are taken when they pass through funnel openings into enclosures from which escape becomes progressively more difficult.



Salmon traps reach their greatest importance in Alaska, and are of two types: **floating** and **standing** or **pile** traps.

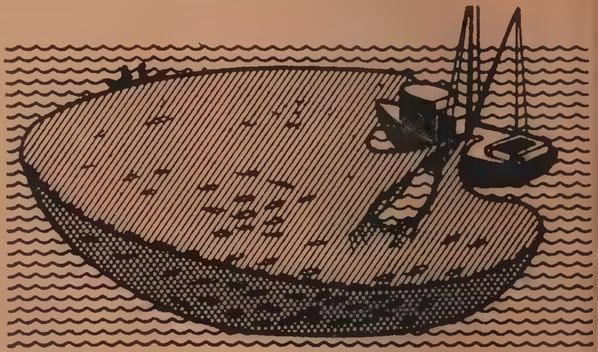
The latter are composed of piling driven into the bottom in outline of the trap, and then clothed with netting.

Floating traps follow the same outline, but are supported from a floating structure composed of logs, and anchored in place. The floating type of trap are used in locations where the water is deep, the bottom rocky, and the tide strong.

Salmon are taken in traps alive, and considerable quantities can be held at a time. Consequently, traps provide a reserve cushion against sharp fluctuation in cannery fish supply.

Traps account for approximately 40 per cent of the Alaska salmon catch.

To all practical purposes, salmon fishing by means of traps is now confined solely to Alaska as result of attacks made upon this method by operators of other forms of gear, essentially on the grounds that the trap constitutes an exclusive right of fishery.



Purse Seining Encircles

This form of fishing is the application of the **Encirclement** principle. It was developed on the Pacific Coast as a specialized method of fishing—and since has been widely applied throughout the world in catching fish which have the habit of schooling near the surface.

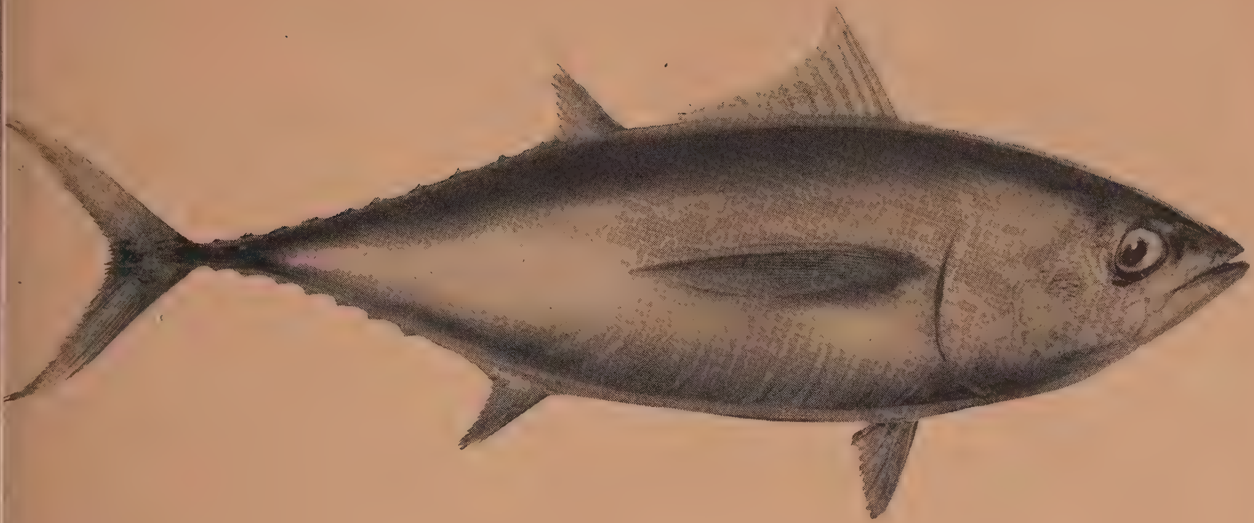
Presence of a school is detected by any one of several means, depending upon the kind of fish and locality. The fishing vessel then describes a circle about the school, the seine being pulled from the stern into the water.

When the circle has been completed the fishermen use a power winch to draw-in the "purse line," which runs through rings attached to the lower edge of the net. When these rings have all been drawn together and gotten aboard the vessel the net has been "pursed" at the bottom and the fish cannot escape. The circle of the net is then reduced until the fish are crowded together and can be scooped into the vessel by "brailing."

Salmon purse seines may be as much as 1,800 feet in length.

The number of purse seines fished in Alaska varies from 700 to 1,000, each of them fished by a vessel whose length is limited by regulation to a maximum of about 57 feet. On Puget Sound the average seiner is larger, vessels running up to perhaps 75 feet; and about 210 purse seine vessels are active there each season.

In Alaska approximately 35 per cent of the salmon catch is made by means of purse seines. In Puget Sound the purse seines' share of the salmon catch is at least 75 per cent.



YELLOWFIN

The big fellow above is not only the largest of the commercial tunas, but also the most important component of the lightmeat pack. It is caught widely throughout the tropical and sub-tropical Pacific.

The Four Dominant Tunas —

There are four distinct species of tuna which are commonly canned by American packers.

Of the four species, only the Albacore may be labeled as "White Meat." The other species, being slightly deeper in color when canned, are customarily canned as "Light Meat" tuna.

Little—actually almost nothing—is known of the life history of any of the tunas. They are "Scrombroid" fish of the Mackerel family, far-ranging, pelagic fishes of the open ocean. Although they are usually caught in the vicinity of some land, the presence close to the shore appears to be merely a phase of wide migration.

Where the tuna spawns, and when, and at what age, Man is only just beginning to learn.

We know there are tuna in almost all the warmer seas of the world, but whether the tunas of the mid-Pacific are a part of the same population as that fished along the Pacific Coast of the Americas is a riddle whose answer is not yet clearly known.

Albacore

Highest-prized and highest-priced of the tunas is the Albacore, an unpredictable fellow.

In California he provided the major portion of the tuna pack from the beginning of the industry to the early "Twenties." Then, after a record year in 1925, the species utterly disappeared, and was not again a commercial factor in the California fishery until 1942.

In Pacific Northwest waters, on the other hand, the fish were never taken commercially until about 1937, and the first sizable pack of Albacore was put up in Oregon and Washington in 1938.

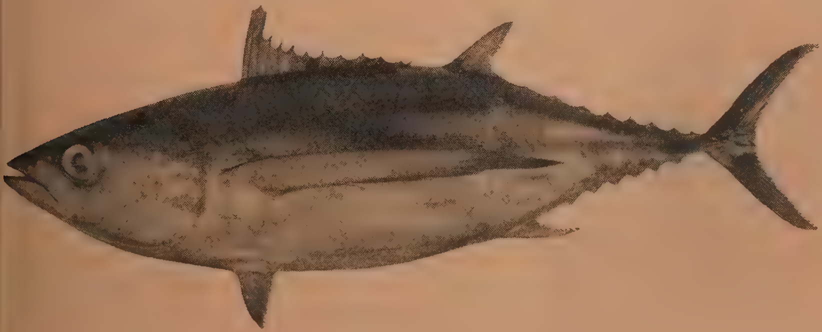
In California waters, on the other hand, the run of Albacore built-up with the passing of the 40's, and in the early '50s reached the greatest volume ever known.

The Albacore is the living embodiment of the streamlined form, with the pointed head of a machine-gun bullet and the tapering tail of a jet plane.

The pectoral fins—those just behind the gill openings —are long and sabre-shaped, actually being half the length of the entire body, and are the outstanding single characteristic of this tuna.

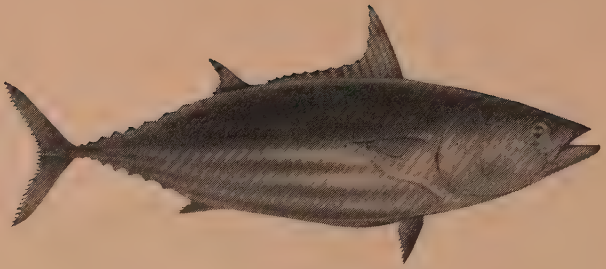
Three physical characteristics distinguish the Albacore from the other tunas.

1. The color of the flesh when prepared by canning is much lighter. Despite the fact that the Albacore is called White Meat Tuna, it is not white in the sense that the flesh of cod or halibut is white, but rather as the breast of chicken or turkey is "white."



ALBACORE

Whitemeat tuna is canned exclusively from this species, which ranges the temperate seas, although sometimes caught along the Equator. It is the principal component of tuna imports, canned or frozen.



SKIPJACK

Though small in size, the Skipjack is second only to Yellowfin in its contribution to the American tuna pack. This variety ranges widely throughout the warmer Pacific and is esteemed in the Orient.

2. Texture of the flesh of the Albacore is firmer than that of the other species, permitting a larger percentage to be canned as "solid pack."

3. "Recovery" is greater. This means that a larger number of cases can be canned from a ton of Albacore of equal size than it is possible to produce from a ton of any of the other species.

Commercial Albacore range in size from 9 to 30 lbs., but the average of those taken along the Pacific Coast is not over 15 lbs. The fish caught from Mexico north to Alaska are regarded by the scientists as immature, in that they have never spawned.

Yellowfin

This tuna is by all odds the most important factor in the tuna pack, accounting for more than half of the entire American catch.

Virtually the entire production is taken from waters off Central and South America, only a handful of Yellowfin coming from California waters.

Yellowfin tuna range in size to above 200 pounds, although canners prefer not to pack specimens of more than 150 pounds in weight. The fish are taken throughout the year along the tropical and sub-tropical coast, generally moving northward during the summer months, and south again in the cooler part of the year above the Equator.

This tuna is taken in the southwestern and central equatorial Pacific, but the primary concentration known is along the coast of North and South America.

The flesh of the Yellowfin is characteristic of the Light Meat grade of canned tuna. It is relatively soft in texture and full in flavor.

Scientific name of the Yellowfin is **Neothunnus macropterus.**

Skipjack

This is the smallest of the tunas, but second to the Yellowfin in importance as a component of the canned pack.

A little fish, ranging up to about 25 inches in length, the Skipjack is readily distinguished by a number of dark horizontal stripes on the silvery surface of the lower part of the body. This marking leads to the name Striped Tuna, which is sometimes given to the species, although its use seems to be declining in favor of the term Skipjack.

Like the Yellowfin, the Skipjack catch is made almost exclusively in the waters off the coast of Mexico, Central and South America.

Due to the small size of the Skipjack, recovery in cases canned per ton of fish is relatively small. The color of the flesh is slightly darker than Yellowfin, although this difference is so fine as to be noted only with difficulty.

Texture of the flesh is soft, and Skipjack must be handled with special care aboard the fishing vessel.

Bluefin

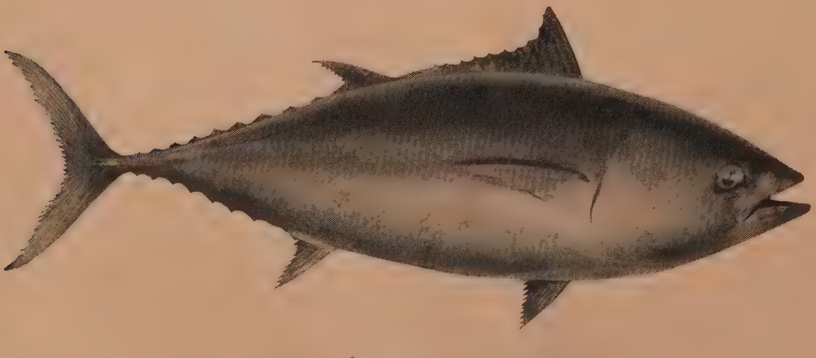
This is the "Tunny" of the ancient Romans, the tuna of classical antiquity, found in warm seas throughout the entire world, but never in great concentrations supporting major fisheries.

The Bluefin on the Pacific Coast is taken usually during the early summer, and along a relatively short section of the coastline from the latitude of Los Angeles south down the coast of Mexico.

Bluefin is the tuna of greatest interest to the sportsman, and is the species which supports the sport tuna fishery of the Atlantic Coast, and which provides a commercial fishery of growing importance in the Maritime Provinces of Canada, as well as along the coast of Maine.

Hand-I-Book Available From Pacific Fisherman

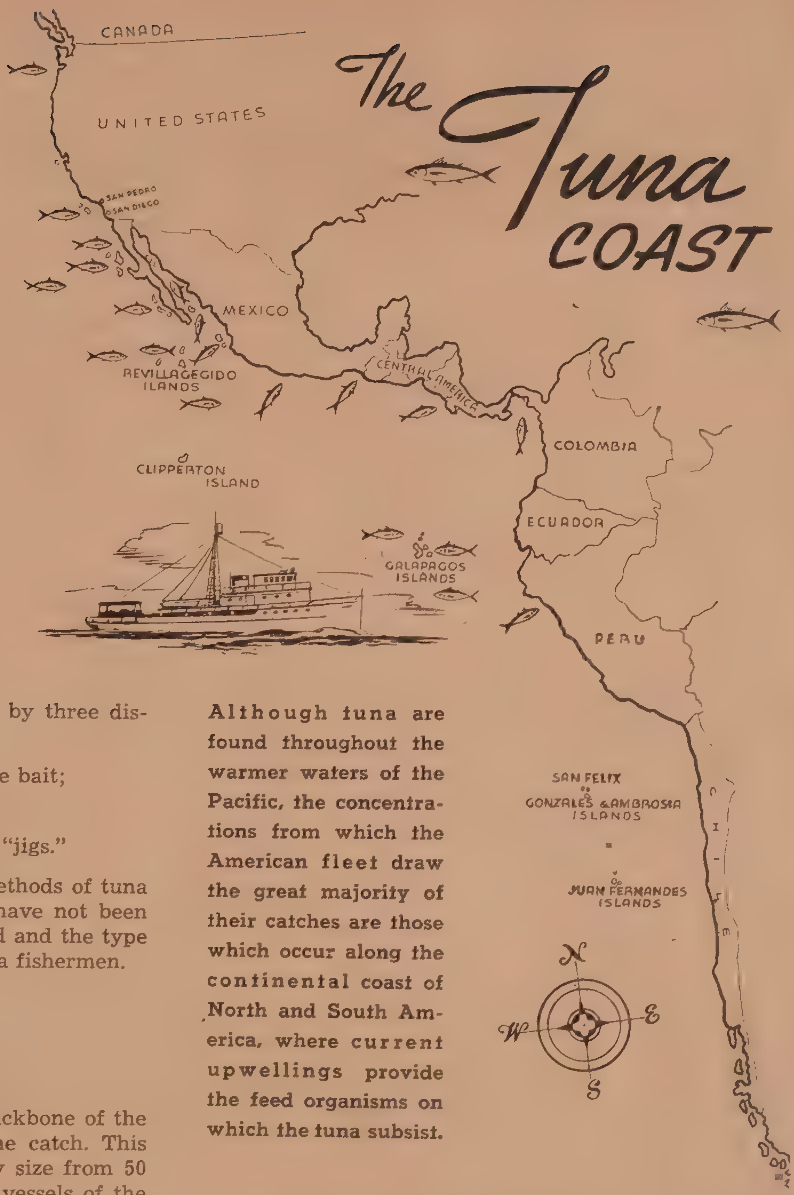
Pacific Fisherman's Canned Fish HAND-I-BOOK is published by Pacific Fisherman, 71 Columbia Street, Seattle 4, Wash. Additional copies can be ordered from this address at 25c per copy in quantities up to 25. Prices for larger quantities will be quoted upon request.



BLUEFIN

This is the most widely distributed of the commercial tunas, although not a dominant factor in the pack. It is the form taken in the Atlantic off the New England coast. Although esteemed by sportsmen, this fish is taken commercially in the Pacific almost exclusively by purse seining.

HOW and WHERE TUNA are TAKEN


The Tuna COAST

Although tuna are found throughout the warmer waters of the Pacific, the concentrations from which the American fleet draw the great majority of their catches are those which occur along the continental coast of North and South America, where current upwellings provide the feed organisms on which the tuna subsist.

American tuna fishermen take the fish by three distinct methods:

1—**Hook-and-line** in connection with live bait;

2—**Purse seining;**

3—**Trolling** with specialized lures called "jigs."

In the Orient a number of additional methods of tuna fishing are employed, but to date these have not been adapted effectively to the fish encountered and the type of operations engaged in by American tuna fishermen.

Live-Bait Fishing

Fishing for tuna with live bait is the backbone of the business, and takes the major part of the catch. This method may be employed by craft of any size from 50 feet up, but in general it is practiced by vessels of the type which has come to be known throughout the world as the "tuna clipper."

Stripped to its essentials, the definition of a tuna clipper might be phrased thus:

"A vessel equipped to carry small fish alive for use as bait; capable of being trimmed in such a way as to bring its stern rail as low as possible in the water; and fitted with a refrigeration system permitting it to freeze its catch."

Outwardly, the tuna clipper is readily recognized by the big bait tank carried on the stern. Sea water is circulated through this tank and the small fish—sardines and anchovies—are kept alive in the tank until they are used in fishing.

Actual fishing from a clipper is done by men standing on iron racks hung outside the rail at the stern of the vessel, which is trimmed down until the men are standing almost level with the water. This is necessary in order to enable them to swing the big tuna aboard with their poles.

When a school of tuna is located—which may be accomplished by observing them feeding, by catching a fish on a trolled lure, by watching birds or other means—a few of the live fish from the bait tank are thrown into the water alongside the clipper. This induces a feeding frenzy in the school.

The fishermen on the racks are equipped with heavy bamboo poles, each with a short line carrying a "Squid"—a sort of glorified trout fly with a barbless hook.

In the excitement of feeding, the tuna strike at these hooks and are swung aboard the vessel.

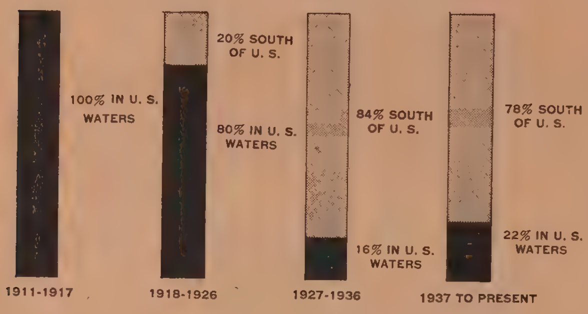
When the school is made up of tuna too large for one man to handle, two, three, or even four poles may be bridled together to a single hook.

Live bait is used to keep the school close to the vessel and in a feeding excitement. **Without such bait, there is no fishing.**

Tuna Purse Seining

Netting tuna by means of a purse seine follows the essentials of the method described in connection with

PROPORTION OF WEST COAST TUNA CATCH TAKEN OFF U. S. COAST AND SOUTH OF THE U. S. DURING DEVELOPMENT OF TUNA FISHERY



salmon fishing. A school of tuna is surrounded by a big net, the bottom of which is "pursed" shut by means of a cable running through rings attached to the lower edge of the net. Thus surrounded, the fish are unable to escape from the net, and finally are crowded together and taken aboard the seiner.

Jig fishing for tuna is customarily practiced only by rather small vessels—those running from 30 to 60 feet in length—although big clippers use it in scouting for fish.

It is an adaptation of trolling, with the artificial lures, known as "jigs," fished close to the surface. The method is of much greater importance in the Albacore fishery than it is for the other tunas.

The lures are made of various substances and in several types, of bone and plastic, metal, feathers and rubber.

Bait fishing is the dominant factor in the production of Yellowfin and Skipjack tuna, although these species are also taken by means of purse seining.

Bluefin tuna are caught almost exclusively by purse seining.

Bait fishing and jigging are the methods employed in catching Albacore tuna.

Modern Tuna Fishing Is "Big Business"

The operator of a tuna clipper or tuna seiner is really a businessman. A good-sized clipper will run from 120 to 150 feet in length, and may carry as much as 2,000 horsepower in her diesel engines—of which there will be not less than three.

Besides the main engine driving the clipper there are at least two diesel auxiliaries running up to 250 horsepower each to provide power for her refrigeration machinery and pumps.

A clipper of this sort may cost around $400,000. Some have run well above this figure.

Most tuna purse seiners are not so large as the clippers, but they are almost as expensive proportionately, while the nets they use are very large and costly. The largest of these nets known to have been fished cost in excess of $40,000.

Refrigeration of Tuna

Question is often raised as to how it is possible for tuna fishing vessels to make long trips, returning to port with full cargoes of several hundred tons of prime tuna after having been at sea for three or four months.

How is it possible to keep fish for several weeks, or even months, without deterioration, and under tropical conditions?

Until the tuna industry worked out the answer to this question it could not attain the stature and volume of production which has marked it in recent years.

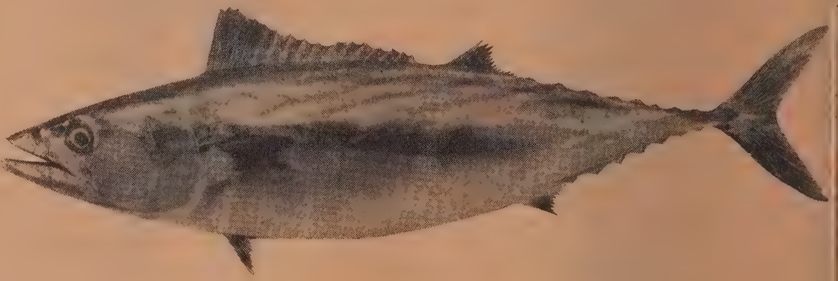
Until it was learned how to keep fish in perfect condition aboard the fishing vessel for weeks it was not possible to extend tuna operations to the point where more than 9,000,000 cases a year could be produced.

The old methods of air-chilling were tried early, but it did not prove possible to chill and keep tuna by this means in the volume and at the rate in which the fish may be received when fishing is flush.

Gradually developed over a period of years, a brine-chilling method was worked out which proved entirely satisfactory; and this opened for the tuna industry the way to greatness.

BONITO

Principal component of the pack of "tuna-like" fishes, the Bonito is also an important factor in the import trade in canned fish, with the principal supplies coming from recently-developed fisheries and packing plants on the west coast of South America.



The "Tuna-Like Fishes"

Official statistics often list "Tuna and Tuna-Like Fishes." This latter characterization refers to two species which resemble tuna somewhat, and which are canned in identical manner, but which may not be labeled as tuna.

BONITO—

This is the fish most commonly referred to under the "tuna-like" designation in the statistics. It is a close relative of the tunas, and somewhat resembles the Skipjack in appearance. The flesh is somewhat soft in texture.

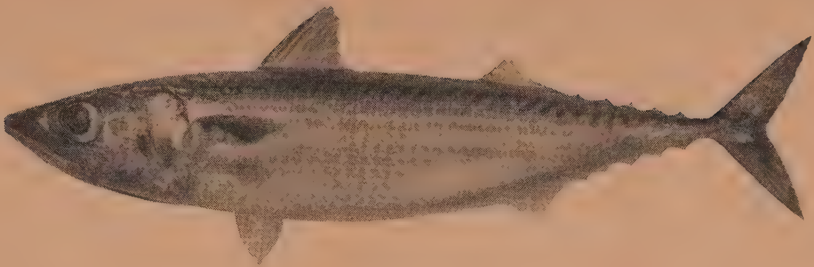
Substantial quantities of bonito are canned, and it is an important factor in imports, particularly from the west coast of South America.

YELLOWTAIL—

This "tuna-like" fish belongs to a totally different family from the true tunas, and resembles tuna much more closely as a canned product than it does either in appearance or scientifically.

Pacific
MACKEREL

Pacific mackerel is smaller in size than the Atlantic variety, but is usually much more abundant. It is a rich, hearty fish, excellent for canning.



Brine-Chilling Method

Very briefly, the process of brine-freezing is this: The hold of a tuna clipper is filled with "cargo wells," which are in fact compartments with hatches opening on deck. These wells are lined with refrigeration piping, and are fitted so that brine may be circulated through and through the wells.

Outward-bound to the fishing ground, the clipper fills at least a portion of the cargo wells with sea-water, to which additional salt is added to permit the temperature to be lowered below the normal freezing point of ocean water. The refrigeration machinery is operated, and the brine in the wells circulated through the coils lining the wells until its temperature is well below freezing.

As soon as the fish are caught they are slipped into one of the brine wells. Circulation of the brine over the frost coils is continued until the tuna are thoroughly frozen by the low-temperature brine. Once the fish are frozen through-and-through, the chilled brine is pumped into another tank and the frost coils take up the task of "holding" the fish frozen in the dry state.

Imports of Tuna

Year	Fresh or Frozen, Lbs.	Canned in Oil, Cases	Canned in Brine, Cases
1931	7,858,000	44,619	....
1933	5,936,000	684,857	....
1935	6,283,000	389,762	....
1936	5,455,000	325,857	....
1937	14,411,000	526,333	....
1938	13,694,000	342,476	....
1939	14,595,000	482,190	....
1943	1,310,000	24,333	....
1944	3,475,000	150,619	....
1945	3,074,000	250,095	....
1946	4,167,000	225,666	....
1947	9,204,000	292,762	....
1948	9,143,000	393,047	619
1949	20,606,000	210,381	3,762
1950	56,712,000	1,737,905	18,143
1951	62,085,000	172,333	445,333
1952	69,003,000	204,190	906,333

U.S. Mackerel Canning Centers on West Coast

American mackerel canning centers almost entirely on the Pacific Coast, and the Pacific production is 100% in California. Pacific canning operations normally account for more than 90% of the national pack of canned mackerel.

Pacific canned mackerel falls into two categories—"Jack" and "Pacific" mackerel. These two types are packed from fish of slightly different species, but the resulting products are very similar.

Normally, "Pacific" mackerel is esteemed over the "Jack" variety; but in recent years the catch of the "Pacific" variety has been short and "Jack" mackerel has accounted for the vast majority of a pack normally running in excess of 1,000,000 cases of 48 lbs. annually.

Both types of mackerel are comparatively low in price and provide a high-protein food in the cheap price range.

Being rich in its own oil, mackerel can be canned "as is", with only salt and fish in the can. Production is almost entirely in 1-lb. tall cans.

Mackerel are caught for canning off the Southern California coast, often quite close to the shore. The major portion of the pack is taken by means of purse seines, although a few fish are produced by "chumming" the fish close to the boat by the attraction of ground food, and then scooping them aboard by means of a dip net.

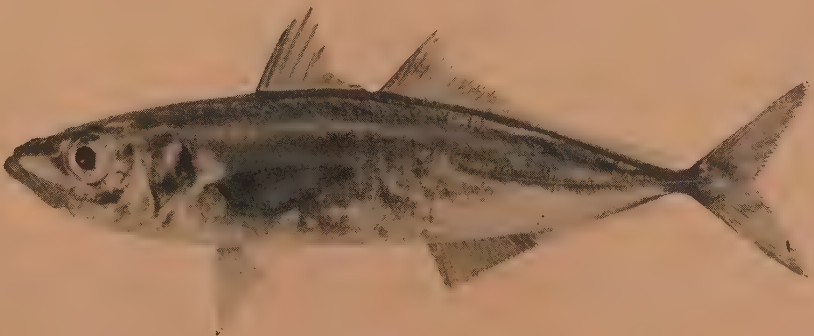
Acknowledgement

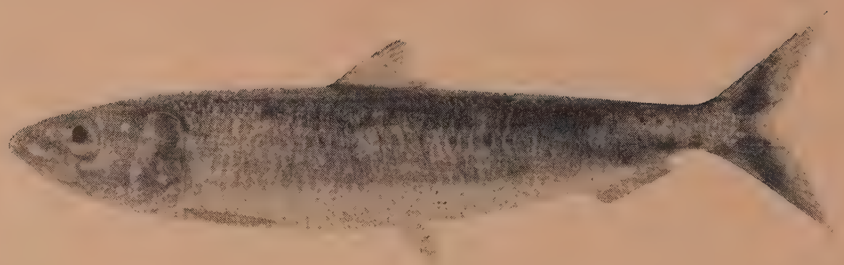
Statistical data and graphic presentations in this Canned Fish Hand-i-Book are taken from official sources, largely from the reports of the United States Fish and Wildlife Service, with some from the United States Tariff Commission.

Information on canning temperatures and process cooks has been drawn largely from "Principles and Methods in the Canning of Fishery Products" by Norman D. Jarvis, U. S. Fish and Wildlife Service Research Report No. 7.

Jack
MACKEREL

Popularity of Jack Mackerel has risen spectacularly in recent years, and this fish is one of the few of which more than 1,000,000 cases are canned.





SARDINE

This is the true California sardine, known in some areas and markets as "pilchard." Normally the most abundant fish taken by American fishermen, this species has been scarce for years.

What IS a Sardine?

Literally, **there is no such fish as a sardine.**

The term "sardine" refers to a type of fish and method of packing, rather than to a species. Several distinct kinds of fish are canned as sardines, and all are properly and legally so-called.

For example, Norwegian sardines are either small herring, called "sild"; or are brisling, a similar but distinct variety of fish.

French and Portuguese sardines are canned from pilchards.

In the United States sardines are canned in Maine, where small herring are used in the pack, and in California where pilchards are employed.

United States legal requirements provide that any small fish **of the herring family** may be canned as sardines, but the name of the country or state where packed should be included on the label.

In addition, sardines are usually, although not always, subjected to a precook which serves to remove some of the natural moisture and oil; and then are canned with the addition of oil or a sauce, such as tomato.

Counter to this broad rule, however, are the tall cans of California sardines in either 6-oz. or 1-lb. sizes, in which an increasing proportion of the pack has been put up in recent years.

The "clupeoid"— or "herring family"— qualification is very important in defining a sardine. In California many anchovies are packed by methods, in style and in cans identical with sardines — but they may not be labelled as such despite the fact that some people think they are as much like sardines as are sardines themselves.

As this is written the United States Food and Drug Administration has in mind a program to re-examine the entire question: What is a sardine? And in the light of its findings to establish new standards of identity.

What Has Happened To California Sardines?

For several seasons prior to this writing the California sardine industry has suffered from a dearth of fish — and the prospect for improvement in supply is not found encouraging by scientists closest to the facts.

Thoughtful observers are convinced that the situation is only temporary—but that "temporary" may involve several years. In the meantime, the California industry does its best to supply its customers by packing such sardines as are available; and by supplementing this production with anchovies canned in a closely similar manner, although American labelling regulations do not permit them to be offered as sardines.

What has happened to the California sardines, which only a few years ago gave the largest catch of any American fishery?

The fact that the sardines were called upon to provide the largest catch tonnage, for one thing.

However, heavy fishing is not the sole reason for the commercial disappearance of the sardines.

Along with it must go the fact that—for reasons not understood—there was no successful spawning of sardines for a period of several years.

Sardine populations, as is the case with many small fish, are sustained not so much by regular annual spawning as by the occasional very successful spawning. "Occasional" usually means one very good spawning in three or four years; with the intervening seasons making only scant contribution.

Thus the failure of the California sardine fishery may be summed up:

1. Very heavy fishing; which coincided with—

2. The lack of any very successful spawning season in a considerable period of years.

Use of the term "extinction" cannot be justified. There cannot be such a thing as the extinction of an abundan marine fishery; although it can readily be brough down by a combination of heavy fishing and natura causes to a condition of depletion to the extent that fishermen cannot make a living from the reduced catches hence they stop fishing.

This is "commercial extinction", which is what ha prevailed in California in recent seasons.

Where, When and How Are Sardines Caught?

In the years of abundance of Pacific sardines the principal catch is made during the fall months. In Centra California the legal season opens August 1, followed b October 1 opening in Southern California.

Fishing dwindles after the first of the year, and over in February.

Principal catches of sardines have come from two general areas on the California coast. The most northerl extend roughly from the Golden Gate at San Francisc south to beyond Monterey; while in the southern pa of California the principal fishery extends from San Barbara south to San Diego.

There formerly was a large fishery for this sam species — there known as "pilchard" — in Canadia waters on the west coast of Vancouver Island; and smaller one along the coast of Oregon and Washingt from Grays Harbor south to Coos Bay. Neither of the northern fisheries compared in importance with t California producing districts.

Seines Catch Sardines

California sardines are caught almost entirely by means of purse seines (described elsewhere in this booklet under the general discussion of gear) or one of several lesser nets from which the purse seine evolved some years ago. These minor types of gear are known as lampara or half-ring nets and are closely related to the purse seine, in that they take the fish by encirclement, with the net manipulated in such a way as to prevent escape of the fish through the bottom.

An interesting aspect of the California sardine fishery is that virtually all fishing is done at night, and that operations are suspended during the period of the full moon each month.

The reason for this is that the phosphorescent glow created by the school of sardines in the dark water reveals the presence of the fish to the lookout in the crowsnest of the vessel.

Of recent seasons there has been a slight trend away from this night fishing as the seiners have learned to use their echo-sounders to detect the fish. Suspension of fishing during the full-moon period remains the rule, however; because men must rest and nets must be repaired.

Processing of Sardines

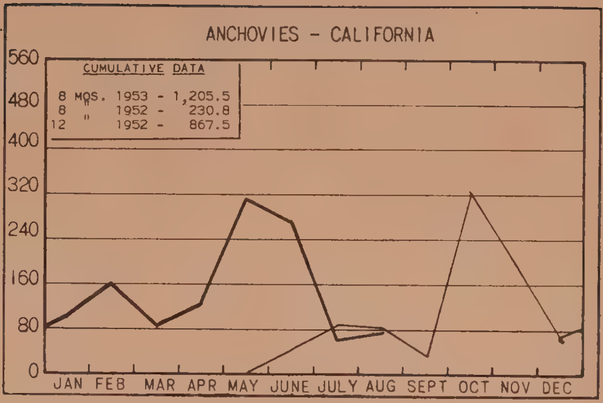
Methods of canning California sardines have undergone broad changes with the years, but appear to have "jelled" recently into several well-established practices.

Newest of the developments in processing sardines has been the introduction of brine refrigeration as a means of holding a reserve of ready-to-pack sardines from one day over until the early part of the next day. These fish are kept just above freezing in tanks of low-temperature brine to maintain them in prime condition.

The refrigeration system also serves to smooth the peaks and valleys of sardine deliveries.

As they reach the cannery, sardines are put through "cutting" machines which remove the head and tail, cutting the fish to exact length for best filling of the type of can being packed at the moment. All viscera is drawn from the body cavity by powerful suction, thus cleaning the fish effectively.

Following washing, the fish may be held overnight in the brine referred to above; or may go on to the can fillers for immediate canning.



California Anchovies Substitute for Sardines

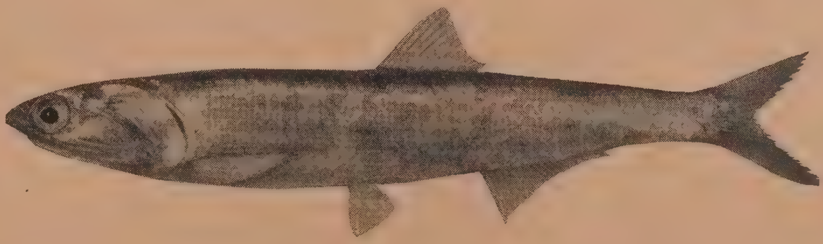
With the acute shortage of California sardines manifest during the early Fifties, the fish canneries of that state utilized anchovies in a canned pack which many consumers considered as having merit comparing favorably with the sardines on which the great canning industry in California was built.

The anchovies taken along the Pacific Coast are true anchovies in every respect, and because of this very fact they may not be labelled as "sardine" under the U.S. food regulations. However, they are canned in the same manner and yield a finished product which compares very closely with that derived from pilchards.

The high labor cost involved in packing anchovies in the tiny fillets and rolled fillets produced in Europe has made it impossible for American operators to use the Pacific anchovy for packs of this type.

At the same time, it must be acknowledged that there is a certain amount of consumer resistance to anchovies packed "sardine style", simply because the American consumer has come to think of anchovies as fish packed in the European manner.

With the shortage of true California sardine in the waters of that state, the canning of anchovies has risen to the point where this fish stands among the top ten in volume of canned production among American varieties.



ANCHOVY

A true anchovy in all respects, the Pacific species is employed principally for canning "sardine style," in which form it has become widely popular in periods when pilchard sardines are scarce.

Canned Sardine Styles

The great majority of California sardines are packed either in 1-lb. oval cans or in tall round cans, either 6-oz. or 1-lb. size.

Oval cans are all filled by hand; and the round cans often are, although in recent years machines for filling the round cans have come into increasing use.

In California most sardines are subject to a pre-cook of some type before the can is closed. The commonest method today involves steaming the fish in open cans for a period of from 30 to 45 minutes at a temperature of 210°.

The cans are then drained of moisture and oil, and usually a sauce is added to the hot fish before the can is closed and sealed. Sardines in round cans often are packed "natural," without sauce.

Tomato sauce is the most popular, although some sardine packs are put up with mustard sauce or other specialty sauces. Salt is added in the sauce.

PACIFIC SALMON DISTRICTS

Their Seasons and Percentages of Production

District:	Principal Season	Average Percentages of Total Pack of Each Species* Red or Sockeye	Pink	Chum	Coho or Silver	Chinook or King
Yukon River	June-July	....	....	....	....	2.2 %
Bristol Bay	June 25 to July 25	60.3 %	†	5.7 %	0.75%	3.35%
Alaska Peninsula	June to August	9.4 %	6.7 %	13.0 %	3.7 %	†
Kodiak Island	June-August	6.9 %	20.9 %	6.0 %	1.95%	†
Cook Inlet	June to August	7.9 %	3.05%	11.5 %	3.4 %	9.9 %
Prince William Sound	August	0.98%	16.7 %	11.2 %	3.08%	†
Copper River	May to September	2.8 %	....	....	11.75%	1.6 %
Yakutat	May to September	0.6 %	0.11%	†	3.9 %	†
Southeast Alaska (Northern part)	Late June to late August	2.2 %	10.9 %	19.6 %	9.2 %	†
Southeast Alaska (Southern part)	Early June-Mid-September	2.5 %	31.7 %	26.4 %	25.3 %	†
British Columbia	Late June-Mid-November	17.5 %‡	17.5 %‡	34.7 %‡	39.5 %‡	4.8 %‡
Puget Sound	June through November	5.8 %	9.1 %	10.5 %	13.4 %	5.16%
Washington Coast	May-June and Oct.-Dec.	0.25%	....	1.0 %	2.4 %	0.9 %
Columbia River	May to December	0.37%	....	1.5 %	9.3 %	73.1 %
Oregon and California Coast	June through November	....	....	†	1.7 %	5.2 %

Note—This table is concerned with salmon for canning only, and takes no account of substantial quantities sold fresh, frozen or mild cured in many areas.

*Percentages are based on average production of each species. Those for areas in the United States are percentages of the total U. S. pack of each species.

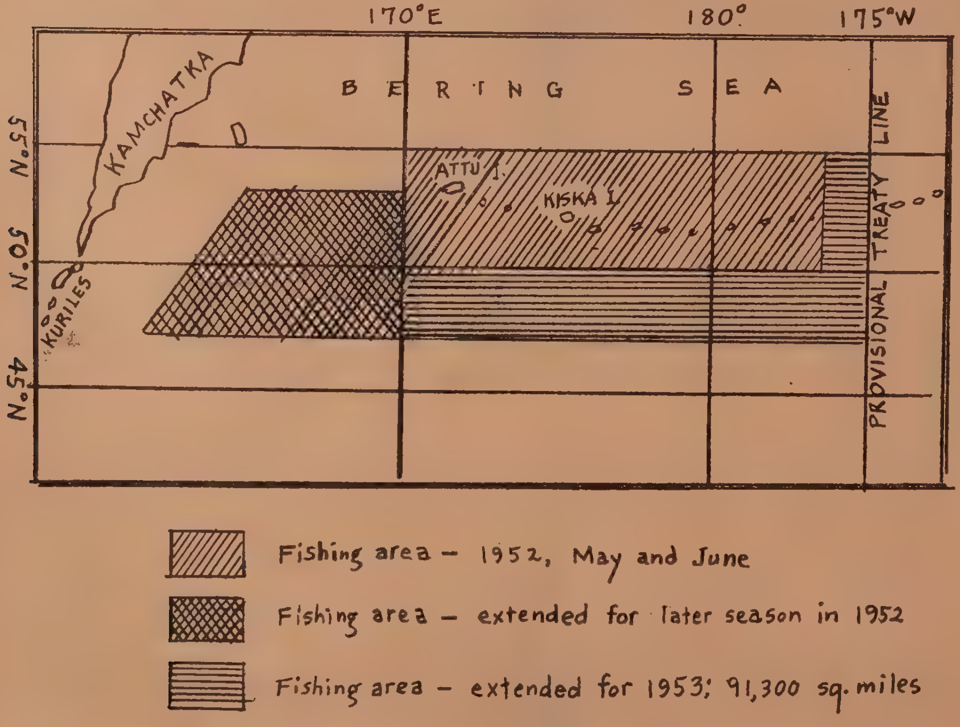
‡Percentages shown for British Columbia are percentages of the total North American pack of each species.

†Negligible production of the species indicated.

Japanese Ocean Fishing May Affect the Future

Since Pacific salmon canning began in 1864, fishing has been confined exclusively to coastal waters and the estuaries of streams; and largely to the seasons when the salmon have attained their maturity and approach the coast to enter their parent streams to spawn. Salmon trolling at sea, close along the coast, takes feeding salmon as well as those of maturity, but the catch of this form of gear is limited to Chinooks and Silvers, and in the aggregate is only a small element of the catch.

Since World War II the Japanese, excluded from their former Asiatic salmon fisheries of Kamchatka, have developed a high-seas salmon fishery which uses gillnets of enormous length to take salmon on the high seas of the North Pacific. Their activities to date have been confined to waters in the vicinity of Kiska, and west almost to Kamchatka. A treaty presently prevents them from fishing salmon closer to Alaska, but many observers in the American industry believe that the high-seas operations of the Japanese are directed in large part


170°E
180°
175°W
BERING SEA
KAMCHATKA
55°N
50°N
45°N
ATTU I.
KISKA I.
KURILES
PROVISIONAL TREATY LINE
Fishing area – 1952, May and June
Fishing area – extended for later season in 1952
Fishing area – extended for 1953; 91,300 sq. miles

The sketch map, prepared for Pacific Fisherman in Tokyo by a Japanese, shows the fishing area in the North Pacific, as extended by the Japanese for 1953. Note that it is limited on the east by the 175th meridian of west longitude, beyond which the Japanese have abstained from fishing under the North Pacific halibut treaty. Most of the fish caught between 170 and 180° are Red salmon. Whether they originated in Alaskan or Asiatic streams no man now knows.

against Alaska Red salmon during their period of ocean growth and feeding.

The ultimate outcome of the Japanese' ocean operations is obscure, but thoughtful men recognize that this venture may affect the future of the salmon resource, and may eventually force changes in American policy as well as methods.

Seasonal Peaks

Much of the salmon pack for a district is canned during comparatively few days during the peak of the "run." This period of high production may constitute only a small part of the legal season for the area.

For example, the season on the Columbia River runs from May 1 to December, but the majority of the production there comes during the three weeks from August 5 to 25.

Similarly, fishing in Central Alaska actually becomes legal May 1, but the peak of production is reached about the end of July.

Accordingly, press announcement of the opening of the Alaska salmon season does not mean that new-pack salmon will be available for shipment in volume for many weeks.

"Yield" of Canned Fish

Numbers of individual fish required to produce a case of the several products may vary widely between seasons and districts. For example, it is quite possible to can a full case of Chinook salmon—four dozen 1-lb. cans or eight dozen halves—from a single salmon. On the other hand, as many as five fish may be required.

Red salmon run much more uniform in size, requiring from 12 to 13 per case; and Silver salmon are usually counted 9 or 10 to the case, with Chums about the same. Although Pink salmon are said to average 17 to the case, not infrequently as many as 24 may be required.

Under the California law, canners are required to pack 13.5 cases for each ton of sardines used in canning. The average is somewhat above this figure, as fish in good condition will yield about 20 cases per ton.

An average of four dozen Pacific crabs are required to pack a case of canned crabmeat.

Shrinkage in Canning

Fish products suffer substantial shrinkage in canning, either through dressing in preparation for packing, or through loss in pre-cook or other preliminary treatment, or both.

Salmon dressing loss ranges from 30% in the case of Chinook and 33% for Reds, Silvers and Chums to 35% in the case of Pinks. The latter are the smallest of the salmon, and it is axiomatic that the smaller the fish the greater the percentage of loss in preparation.

Crabs present instances of product suffering shrinkage both in dressing and in pre-cook. Loss of weight in dressing Pacific crabs and removing shell is about 73%, while the meat shrinks about 2% more in pre-cooking.

Percentage of shrinkage in a number of important canned fish products is as follows: California sardines, 50%; California mackerel, 60%; Albacore, 60%; other tunas, 64%; Shad, 35%; Atlantic oysters, 93%; Pacific oysters, 80%; Shrimp, 75%.

Process of moving canned salmon to market differs sharply from canned foods generally, because the majority of the pack is produced in Alaska during an intensive operating season, and delivery necessarily must wait upon steamer shipment and a thorough system of inspection designed to protect the buyer and insure him of first-class quality.

CANNED SALMON "BRAND" AND "PRODUCT" ADVERTISING COMBINED — DISTRIBUTION BETWEEN MEDIA — WEIGHTED BASIS

Media	Percent	Amount
Newspapers	30.5	$259,555
Magazines	11.7	99,567
Radio	17.2	146,372
Television	1.2	10,212
Billboards*	5.4	45,954
Other Media†	34.0	289,340
Totals	100.0	$851,000

NOTE—Data are for both Canada and the United States, and do not include advertising by buyers or local distributors for which allowance has been made by the canners.

*Includes car cards.

†Includes unbilled publicity, point-of-sale material, recipe booklets and folders, dealer and display helps, etc.

U.S. Per Capita Consumption Of Fishery Products

Year:	Fresh and Frozen Pounds	Canned Pounds	Cured Pounds	Total Pounds
1930	5.9	3.3	1.3	10.5
1931	5.0	3.2	1.0	9.2
1932	4.4	3.4	1.1	8.9
1933	4.2	3.9	.9	9.0
1935	5.2	4.7	1.1	11.0
1936	5.2	5.8	1.0	12.0
1937	5.6	4.2	.9	10.7
1938	5.3	4.8	1.0	11.1
1939	5.4	4.6	.9	10.9
Average 1935-39	5.3	4.8	1.0	11.1
1940	5.7	4.2	.9	10.8
1941	6.3	4.7	.8	11.8
1942	5.3	2.2	.8	8.3
1943	5.6	1.9	.7	8.2
1944	5.6	2.6	.7	8.9
1945	7.1	2.6	.9	10.6
1946	6.3	3.8	1.0	11.1
1947	6.2	3.8	.8	10.8
1948	6.3	3.8	.9	11.0
1949	6.4	4.1	.9	11.4
1950	6.3	4.3	.9	11.5
1951	6.4	4.2	.9	11.5
1952	6.3	4.2	.9	11.4

---

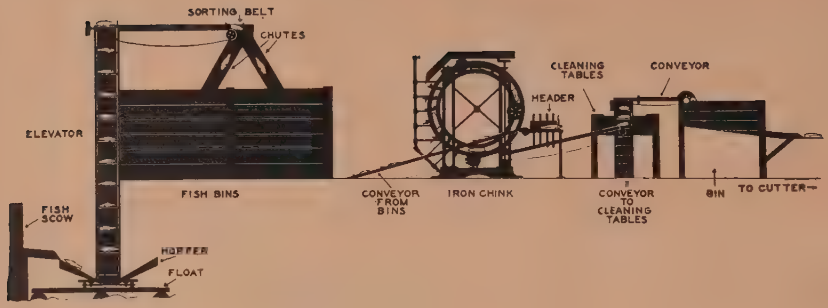
*Included with canned fish.

Note—Canned consumption excludes food products containing only small quantities of fish or shellfish, such as clam chowder. All figures are given in pounds of edible weight.

Crystals in Canned Fish

Commonest source of consumer complaint based on finding foreign substances in canned fish or shellfish is that of "glass"—which almost invariably turns out to be harmless phosphate crystals formed naturally in the can from the naturally-occurring food chemicals of the fish itself.

Cause of these crystals is not definitely known. They occur very rarely, and are entirely harmless in fact, although they may very closely resemble small fragments of glass. They dissolve readily in an acid solution, and the quick and easy test is to place the crystal in heated vinegar. The harmless crystals, which are actually magnesium ammonium phosphate, will disappear gradually.


SORTING BELT
CHUTES
ELEVATOR
FISH SCOW
HOPPER
FLOAT
FISH BINS
CONVEYOR FROM BINS
IRON CHINK
HEADER
CLEANING TABLES
CONVEYOR
CONVEYOR TO CLEANING TABLES
BIN
TO CUTTER→

Salmon Canning—Step 1

From the boat, the salmon are conveyed into the cannery, sorted into bins according to species, dressed by the Iron Chink, inspected and trimmed at the cleaning tables.

HOW SALMON IS CANNED

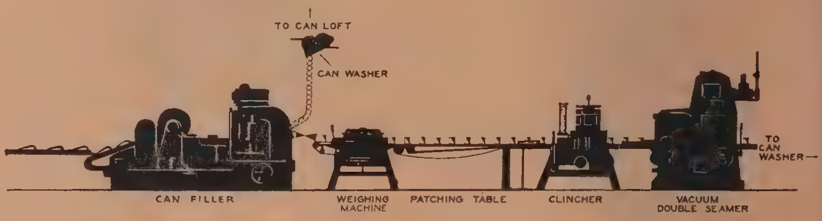
Salmon is delivered to the cannery fresh from the water, either by the fishing vessel itself or by a tender which has received the fish from the fishing craft or a salmon trap on the actual fishing grounds.

The fish enter the plant by elevator-conveyor or hoist, and are sorted into separate bins according to species. From these bins the fish are drawn for delivery by conveyor to the Iron Chink, a machine unique to salmon canning, which removes the head, tail and fins, slits the belly and removes the viscera, all at the rate of 60 fish per minute.

From the Iron Chink the dressed fish are carried to the "slimers," workmen who inspect each fish for condition, and correct any faults in the mechanical cleaning.

Salmon Canning—Step 2

The can-filler cuts the salmon to can length, fills and salts the cans, which are weighed and then get their tops at the clincher. The vacuum seamer extracts all air from the can and seals the lid.


TO CAN LOFT
CAN WASHER
TO CAN WASHER—
CAN FILLER
WEIGHING MACHINE
PATCHING TABLE
CLINCHER
VACUUM DOUBLE SEAMER

Salmon Can Filling

The fish are next cut into lengths appropriate to the height of the can in which they will be packed. This cutting may be done either by a separate gang-knife or by a unit which operates as an integral part of the filling machine, which is the next step in the operation.

The salmon can-filling machine molds a cylinder of fish to a diameter which will slip readily into the can, and then presses this into the container, at speeds as high as 240 cans per minute.

From the fillers the cans go through weighing machines which check weights to a fraction of an ounce and reject any under-weight cans. These are brought up to weight by inspectors, who watch all cans for imperfections in filling.

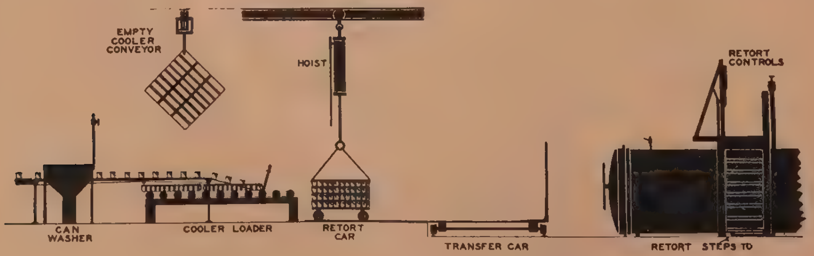
A measured amount of salt is deposited in each can just before the top is applied and loosely attached by the "clincher," from which it immediately enters the vacuum seaming machine through a pressure lock.

Vacuum Packing Process

The vacuum machine operates inside a tight housing, from which the air is exhausted by a vacuum pump, which also removes the air entrapped in the can. The loosely clinched can top allows the air to escape, and as soon as this has been accomplished the machine finishes the seam on the can, providing an hermetic seal.

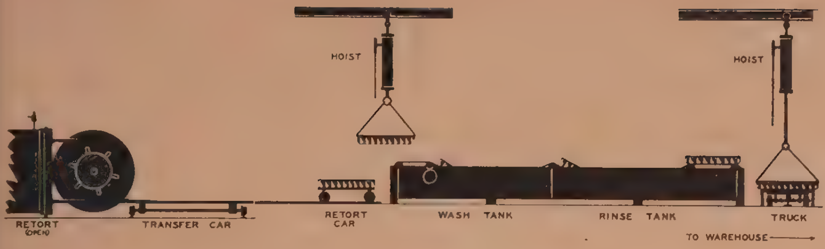
Filled cans are washed in a detergent solution, rinsed, and then distributed by machine into "coolers," which are shallow iron trays. A stack of filled coolers is built up on a low wheeled frame, and the entire stack is pushed into the retort or autoclave for the process cook.

This cook is usually 90 minutes at 240°—for 1-pound tall cans—and at its conclusion the cans are given a second wash, then cooled and the trays unloaded mechanically. They may be labeled at this stage, although in Alaska operations much of the salmon is labeled later.


EMPTY COOLER CONVEYOR
HOIST
RETORT CONTROLS
CAN WASHER
COOLER LOADER
RETORT CAR
TRANSFER CAR
RETORT
STEPS TO

Salmon Canning—Step 3

After sealing, the cans are washed and loaded into shallow metal trays called "coolers", which are stacked on wheeled trucks and rolled into the retorts for sterilizing.



Salmon Canning—Step 4

After being cooked at 240° for 90 minutes, the salmon is withdrawn from the retort and the cans are washed, rinsed and cooled before going to the warehouse.

Whether or not labeled at the cannery, the cans roll to a caseloading machine, which places 48 cans in the fibre case, passing it along to the machine which closes, glues and seals the case ready for shipment.

Hand-Packed Salmon

The flow-sheet described above is that typical of the high-speed machine-butchering, machine-filling cannery from which comes the great majority of the canned salmon pack.

In some districts, notably the Columbia River, the salmon are butchered by hand. This practice is followed because of the wide variation in the size of the individual fish in a catch of Chinook salmon; and also because they are caught over a longer season and are not delivered in the heavy volume requiring machine operation.

Laboratory Inspection

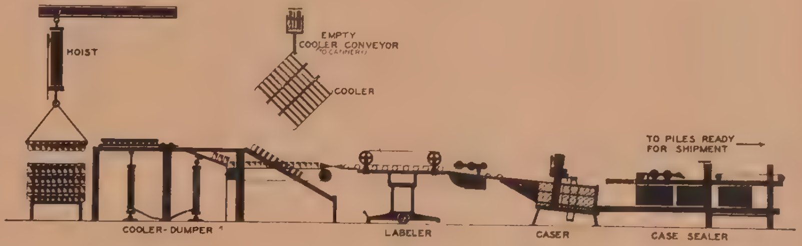
As one of the several safeguards taken to protect the buyer of canned salmon, parcels received from Alaska are sampled and examined by the staff of the National Canners Association, Northwest Branch, inspection laboratory.

Random samples are drawn from each "code" in a lot, the number of samples varying somewhat according to the average size of the fish of that species. Obviously, if the fish are large—such as Kings—a smaller number of cans is necessary to give a representative sample of the fish in the parcel than is the case with Pinks, where the individual fish are only about one-fifth as large.

Report is made to the packer of the results of each inspection. In the event that this examination shows **any** fish of questionable quality in a lot, the packer is immediately informed and the particular code involved is set aside for re-examination.

Salmon Canning—Step 5

The cooler trays are unloaded mechanically and the cans pass to a labelling machine and then to machines which fill, close and seal the cases automatically.


HOIST
EMPTY COOLER CONVEYOR (TO CANNERY)
COOLER
TO PILES READY FOR SHIPMENT
COOLER-DUMPER
LABELER
CASER
CASE SEALER

Hand-filling of the cans is also practiced, particularly when the volume of fish does not peak in a great run, and also when putting up fancy packs of the higher grades.

Hand-filling is confined to flat or oval cans. Talls are never hand-filled.

Plant Investment Large

The nature of salmon runs, in which enormous volume of fish is taken in a period of a few weeks, sometimes even in a few days, makes it necessary to maintain a plant with capacity for handling the extreme peaks.

This obviously involves large investment, not only in a plant erected at a remote point where costs are fantastically high, but also in the men to man the machines at peaks of run.

This investment demand is one of the unusual cost factors entering into salmon packing.

Bristol Bay operations offer a case in point. The season there is only 24 fishing days in length—and may be cut shorter. At the same time, the Red salmon runs characteristic of Bristol Bay peak during only about 10 days of the entire season. This requires tremendous outlay for plant and equipment to handle the heavy run; and it should be recalled that the cannery and its machinery have an annual productive period less than a month in length.

What the Expert Seeks

Laboratory inspection of canned salmon is a task for an expert, and demands long experience, as most of the criteria cannot be measured mechanically and call for judgment on the part of the inspector. Moreover, distinctions are based in large degree on odor, flavor, shades of color, degrees of firmness, all difficult of precise definition.

Inspection criteria generally employed are:

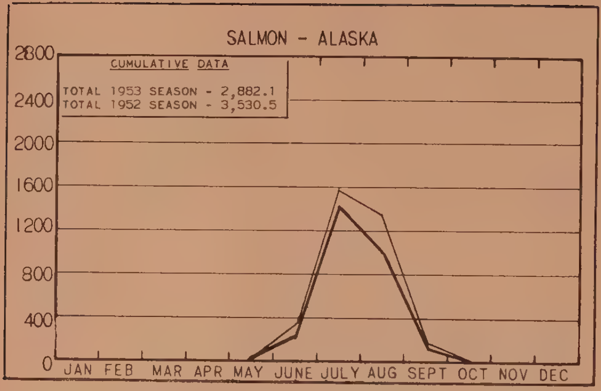
General—(1) net weight; (2) Vacuum; (3) headspace; (4) condition of can.

Workmanship—(1) filling; (2) cleaning; (3) bruises, etc.; (4) cooking; (5) salting.

Quality—(1) amount of free oil; (2) amount other liquids; (3) color of oil; (4) color of flesh; (5) condition of skin.

Condition—(1) odor; (2) flavor; (3) texture; (4) condition of aqueous liquor; (5) honey-combing; (6) reddening of flesh.

ACKNOWLEDGEMENT—The silhouette sketches of the salmon canning flow sheet reproduced herewith were drawn by the late O. E. Shostrom, Northwest Branch, National Canners Association.



The polygons showing the low seasonal catches of salmon in Alaska during 1952 and 1953 gives graphic presentation also of the close concentration of salmon fishing during the summer months. This is one of the conditions which contributes to the risks and costs of salmon packing — it is necessary to maintain a great plant for only a few weeks of annual activity.

Salmon Color Natural

Although salmon has been canned for 90 years, misconceptions still exist regarding the differences in the color of the several species, and also between different grades of the same species.

These variations in color are entirely normal.

No artificial color is ever added to canned salmon; nor are differences in color ever the result of varied packing processes.

The several species have flesh of distinctive color, but considerable range of color may occur in the same species. Such color range is particularly notable in the case of Chinook salmon, and is associated with natural seasonal or regional variations in the color of the flesh.

The color of the salmon changes in the process of cooking, as in the case of many foods; but pale salmon is pale by nature, and pale color is in no way an indication of unwholesomeness.

Function of Codes

Packers of seafoods generally identify their products with code marks embossed in the can lids at time of closure. These code marks may be simple, or quite elaborate, depending upon the complexity of the packers' organization or his desire for full identification.

Codes normally show the cannery, the year of packing, the day of that packing year, and the species of fish.

In addition, they may give such further details as the line on which the fish was packed, the shift of the particular day of packing, the lot of fish involved, and perhaps the source of the fish—such as gillnet or seine or trap.

Code markings stencilled on the cases are somewhat simpler, but usually show the cannery, species, date and year of packing.

Code-marking of cans and cases facilitates segregation of any lot of salmon which may be called into question in inspection; and reduces the likelihood of accidentally mixing of the several species prior to labeling.

Why "Collapsed Cans"?

"Collapsed cans" are peculiar to the Alaska canned salmon business—although they are used to a nominal extent elsewhere — and were developed to reduce the heavy cost of making cans in Alaska, or of shipping empty ones to the North.

Prior to development of the "collapsed can," most Alaska packers maintained actual can factories at their canneries. To maintain and operate such a plant in Alaska was very expensive.

This resulted in development of the collapsed cans, which are actually a normal can body, flattened before the ends are flanged and the bottom applied. The formed cylinder is flattened and packed in cases, five "collapsed" cans occupying about the same space as one made-up can.

At the cannery the flattened can bodies are run through a machine which reforms them, and another which flanges the ends of the cylinders. Finally the bottom is applied and seamed onto the can before it is tested, filled and closed.

N.C.A. Salmon Oil Rating Table

(Figures give free oil in cubic centimeters.)

Species and Can Size	Good	Average	Poor
Alaska Red, 1-lb.	8.3 up	6.4-4.0	1.8 down
Medium Red, 1-lb.	6.7 up	5.1-3.2	1.5 down
Pink, 1-lb.	4.8 up	3.7-2.3	1.0 down
Chum, 1-lb.	3.1 up	2.4-1.5	0.7 down
Chinook, ½-lb.	11.7 up	9.1-5.7	2.6 down
Sockeye, ½-lb.	4.8 up	3.6-2.3	1.0 down

Convex Cans

Cans with convex ends — known in the trade as "swells," "puffs," "springers" or "flippers"—are normally regarded as evidence of spoilage after processing. This may be due to inadequate cooking; to imperfectly sealed, leaky or perforated cans, or to chemical action between contents and container.

Some degree of convexity may result from inadequate vacuum or overfilling. Such slightly convex cans —which, when pressed in, remain of normal shape and are usually known as "springers"— though sometimes spoiled, may be merely lacking in vacuum. Cans that are really distended, known as "hard swells," are definitely spoiled; and cans showing **any degree** of convexity though sometimes found in sound and wholesome products, are always under suspicion and should never be offered for sale unless found safe by scientific examination.

In many instances cans with little vacuum, of normal appearance in the cool and dense atmosphere of sea-level, have become "springers" or even "swells" when shipped to points of high altitude or high temperature, or both; but when returned to sea level resumed their normal appearance, and showed no spoilage on chemical-bacteriological examination. Similar difficulty has occurred in shipments from canneries in the temperate zone to the tropics.

Owing to mechanical imperfections, some convex cans may occur in any pack. Because of this, the trade custom has arisen of granting to buyers a percentage of the packer's price as "swell allowance." With improved techniques, however, the occurrence of "swells" in the major canned fish packs has gradually diminished with reduction of the "swell allowance" from time to time. In recent years they have been almost entirely eliminated from the canned salmon and tuna output, and the allowance, after standing for some time at one-half of 1 per cent, was cut some years ago to one-tenth of 1 per cent.

Not For Technical Reference

Data given in this Canned Fish Hand-i-Book on times and temperatures for the sterilizing cooks in canning of fishery products are for general information only, and should not be used as the basis for actual operations.

Persons expecting to engage in canning should consult canning technologists or technical literature for processing times, temperatures and pressures.

U. S. Pack of Canned Salmon

Year:	—Pacific Coast States—		—Alaska—		—Total—	
	Cases	Value	Cases	Value	Cases	Value
1921-1930 Average	1,147,835	$11,916,541	4,860,058	$33,893,502	6,007,893	$ 45,810,043
1931-1935 Average	984,706	7,301,890	5,699,775	28,513,777	6,684,481	35,815,667
1936	527,574	5,309,438	8,437,603	44.751.633	8,965,177	50,061,071
1937	885,372	8,386,165	6,669,665	44,547,769	7,555,037	52,933,934
1938	472,721	5,728,892	6,806,998	36,636,897	7,279,719	42,365,789
1939	728,943	7,339,727	5,263,161	34,441,122	5,992,104	41,780,849
1940	535,663	6,575,176	5,069,343	31,474,492	5,605,006	38,049,668
1941	899,589	11,199,317	6,932,040	56,217,601	7,831,629	67,416,918
1942	759,032	13,673,968	5,075,974	48,300,209	5,835,006	61,974,177
1943	275,889	5,110,847	5,428,318	57,824,267	5,704,207	62,935,114
1944	245,588	5,187,136	4,893,059	51,196,140	5,138,647	56,383,276
1945	557,769	7,942,102	4,350,471	44,644,303	4,908,240	52,586,405
1946	560,289	17,003,459	3,949,878	53,157,194	4,510,167	70,160,653
1947	1,329,226	31,969,134	4,312,286	88,669,542	5,641,512	120,638,676
1948	810,075	24,008,466	4,014,891	96,528,730	4,824,966	120,537,196
1949	1,133,325	22,167,812	4,391,601	81,263,171	5,524,926	103,430,983
1950	1,001,819	27,187,060	3,307,985	82,354,118	4,309,804	109,541,178
1951	1,161,274	29,388,514	3,484,299	79,237,355	4,645,573	108,625,869
1952	890,156	21,906,773	3,574,191	76,357,191	4,464,347	98,263,789

"Packed from Frozen"

"Packed from frozen fish" in an offering of canned salmon usually is taken to mean that the goods have been canned on Puget Sound—occasionally in Alaska—from salmon which had been brine-frozen on the fishing grounds during the short operating season.

Such fish usually takes a slightly lower price than salmon canned from fish which has not been frozen. This discount averages about $1 per case on Reds, which account for the great majority of the salmon produced under this practice.

Salmon canned from fish which have been brine-frozen has several characteristics which are recognized by expert examiners—and which usually are taken by the trade to require a slight discount under the price of salmon canned from fresh fish.

Characteristics noted in canned salmon prepared from brine-frozen fish can be listed and explained as follows:

Less free oil. For some reason not well understood the flesh of salmon which has been brine frozen tends to retain the oil, which thus does not appear on the top of the open can to the same degree as in the case of salmon canned from fresh fish. While some operators contend that this oil retention improves the richness and nutritional value of the solid contents of the can, the fact remains that the trade makes a practice of judging salmon in some degree by the free oil in the can. This leads to some slight discounting of salmon in which the oil is largely retained in the flesh.

Redding under skin. This condition is not always evident in salmon canned from brine-frozen fish. It apparently is caused by salt penetration in the process of brine-freezing, which seems to "fix" the original color of the flesh just below the skin, so this color is not altered as markedly as usual in the process cook. This reddening is not related to, and should not be confused with, the "feverish" reddening, usually along the backbone, which is one of the indexes of deterioration.

Fibrous texture. Salmon canned from brine-frozen fish seems to be characterized by a certain fibrosity within the muscular flakes. Reason for this is not apparent, but it evidently is the result of the slight penetration which occurs during freezing.

Freezing is Employed In Shore Plants Also

Employment of freezing in connection with salmon canning has developed along two distinctly different lines, with different reasons, objectives and products.

The most generally recognized practice has already been discussed and involves brine-freezing by a freezership operating on the fishing grounds, with later transport of the cargo of frozen fish to a shore plant for canning.

The less common, but increasingly important, practice involves the use of refrigeration—sometimes not actual freezing—to protect the prime quality of fresh-caught salmon until it can be packed on an economic basis.

Use of such refrigeration as an element in salmon packing undoubtedly had its origin on the Columbia River a good many years ago. It has subsequently become a factor of importance on the Columbia River; and of recent years numbers of Alaska operators have installed facilities permitting them to freeze or otherwise refrigerate parcels of salmon until they can be canned to best advantage.

Often such refrigeration may be only overnight, or a day or two at the most. Usually it is impossible even for the most expert examiner to distinguish fish which has been air-frozen for a brief period before canning from that packed in fresh fish handled through the cannery in the normal manner.

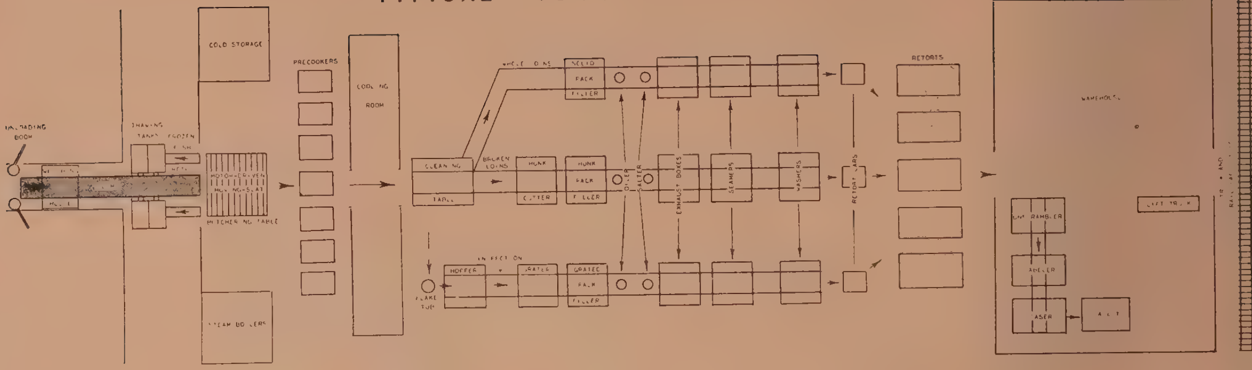
Premium on Promptness

Salmon brine-frozen for subsequent canning are held in frozen storage only a short time. Consequently, there is very little change of the kind often associated with frozen storage, such as dehydration and rancidity.

Most of the salmon brine-frozen for canning is derived from Bristol Bay, where the season is only one month in length, running from June 24 to July 24. The freezerships depart for Puget Sound immediately upon the close of the season, and the canning of their cargoes is usually complete by the middle of August. Thus it is apparent that the oldest fish in the cargo have been frozen less than two months.

A premium is put upon speed in canning freezership fish because it may be desired to release the vessels for use in some other fishery; and to minimize storage charges.

TYPICAL TUNA PLANT LAYOUT


COLD STORAGE
PRECOOKERS
COOLING ROOM
UNLOADING BOOM
THAWING TANKS
FROZEN FISH
MOTOR-DRIVEN MOVING-SLAT
BUTCHERING TABLE
STEAM BOILERS
WHOLE LOINS
SOLID PACK FILLER
CLEANING TABLE
BROKEN LOINS
CHUNK CUTTER
CHUNK PACK FILLER
INSPECTION
HOPPER
GRATER
GRATED PACK FILLER
FLAKE TUB
OILER
SALTER
EXHAUST BOXES
SEAMERS
WASHERS
RETORT CARS
RETORTS
WAREHOUSE
UNSCRAMBLER
LABELER
CASER
LIFT TRUCK

THE TUNA PACKING PROCESS

Tuna is not dressed aboard the fishing vessel, experience having proven that round fish refrigerate better than those which have been opened.

Upon delivery at the cannery, the tuna are thawed and are then dressed, but the head is not removed.

Dressed tuna are placed in racks in wheeled trucks, sorted somewhat according to size. They are placed belly down to facilitate draining of oil and moisture drawn from the fish during the pre-cook, in which the fish are subjected to a steam cook for a period depending upon their size.

Upon completion of the pre-cook the racks are withdrawn and are wheeled into a well-ventilated area for cooling. Time required to cool depends upon temperature, humidity and size of fish. It will average about 12 hours.

Tuna Pre-Cook Data

Species:	Weight	Coming-up Time, Min.	Pre-cook Time at 216°, Hrs.
Skipjack	5-12	20	2-2½
Albacore	10-14	20	3-3½
	15-40	30	4-4½
Yellowfin or Bluefin	8-18	30	2
	18-50	40	3
	50-60	60	4
	60 up	60	5-9

Tuna Preparation Steps

Pre-cooked tuna after cooling are discharged from the baskets at the head of the cleaning line. Here the head is removed and the cooked skin and fins scraped away.

Then the dark meat is removed, and the fish is divided along the backbone, and again at the natural division line along the sides, to give four "loins" of firm white or light meat.

How Tuna Cans are Filled

Process of filling cans of tuna has undergone vast technological change in the past few years, and continues to change in the direction of mechanization. This change stems primarily from the introduction of the "Pak-Shaper," a machine which molds the loins of tuna into a uniform cylinder, cuts off a measured section of the cylinder, and places it neatly in the can—all at a speed of about 120 cans per minute. This is equivalent to the can-filling capacity of about 40 hand operators.

From its introduction shortly after World War II, the "Pak-Shaper" advanced rapidly in acceptance by the industry until currently it is estimated that about 90% of the solid-pack tuna produced in the United States is mechanically-filled by this equipment.

Canned Tuna Process Cook

Can Size:	Coming-up Time, Min.	Process Cook, Minutes 240° F.	250° F.
¼-lb. tuna	10	65	40
½-lb. tuna	10	75	55
1-lb. tuna	10	95	80
4-lb. tuna	10	230	190

Another machine, known as the "Pak-Former," has contributed importantly, although not so sweepingly, to a second notable technological shift in tuna packing—the remarkable rise of the "bite size" pack, intermediate between solid-pack and flakes. This device is utilized primarily in filling cans with "bite-size" or "chunk style" tuna; and has the ability to form the proper weight o tuna to fit the can without crushing or over-compressing Speed is as great as 250 cans per minute. The speed with which this machine, and other somewhat similar ones, fill cans of "chunk-style" tuna, and the cost saving resulting from this economy, reflected in retail price has had a great deal to do with the astonishing rise in popularity of this type of tuna pack.

Tuna Pack Styles— And Their Differences

Styles of tuna pack produced in the United States fa into four general classifications on the basis of partic size and type of filling—

1. "Solid-pack" or "Fancy;"
2. "Standard;"
3. "Bite-size" or "Chunk style;"
4. "Grated" or "Flakes."

"Solid-pack" or "fancy" tuna consists of three—occ sionally four—sections of loins fitted together in such a manner as to fill the can.

"Standard" pack is no longer a factor of much importance, having been superseded almost entirely by the other styles, largely as result of the introduction of the pack shaper. It consisted of a pack with two or three solid sections of loin and with the remaining space in the can filled with flakes.

"Bite-size" or "Chunk style" tuna is produced from loins, which are machine-cut to produce "squarish" bits and chunks of tuna, which are then filled in the can without crushing.

"Flakes" or "grated tuna" are the smaller bits scraped from the loins in the process of preparation; or which are formed in cutting the loins for packing by the styles previously discussed. They may be canned in the sizes thus produced, although frequently the material is passed through a grater which results in virtually uniform fragmentation.

Rise of "Bite Size" Tuna Phenomenal

Rise of the "bite-size" tuna pack in recent years has been one of the phenomena of the industry. Prior to 1939 more than 90% of the total output of canned tuna was packed either as "fancy" or "standard" grade.

In that year "grated" tuna was introduced, resulting in a sharp rise from 7.2% to 12.1% of the tuna pack produced in the finer fragmentation. From that point the trend has been most marked.

This was accelerated in 1948, when the first pack of "bite-size" tuna was marketed. This pack proved highly popular with the consumer and the retail trade as well, with the result that it quickly became the most important style of all.

Specialty Tuna Packs

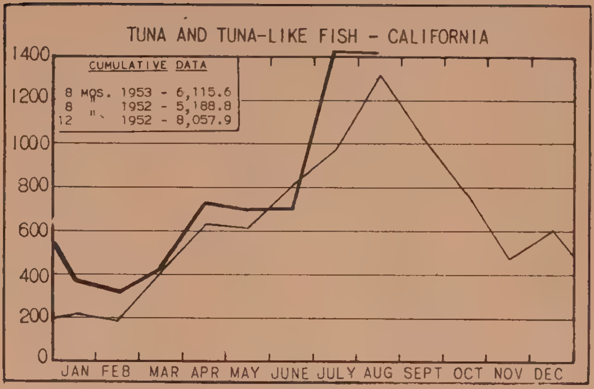
Specialty tuna packs are of comparatively minor importance, although two of them—"tonno" and "light-and-dark"—account for considerable volume.

"Tonno" is a product packed primarily for the Italian trade. The darker tuna, usually Skipjack, goes into this pack, which is more heavily salted than usual for tuna, and is always packed in olive oil. The product has attained some popularity outside of the Italian trade, particularly among persons enjoying its hearty flavor over the blander type of standard tuna.

"Light-and-dark" is a product of a very different type. It combines light or white meat flakes with flakes of the dark muscular material which is scraped away when the loins are prepared. The proportion of dark to light in this pack varies somewhat with the different operators, but in all cases the dark portion is limited to the muscular structure. Flavor of this blended product is more definite than in either lightmeat or whitemeat tuna. "Light-and-dark" finds its principal use in the low-price markets or the sandwich trade.

U. S. Packs of Tuna

Year	Solid Pack Percent	Other Packs Percent	Total Pounds
1929	94.2	5.8	31,286,448
1930	94.5	5.5	41,837,736
1931	93.8	6.2	25,295,175
1932	91.4	8.6	24,972,558
1933	93.4	6.6	29,976,450
1934	93.3	6.7	40,846,371
1935	93.9	6.1	52,192,527
1936	94.2	5.8	55,755,246
1937	92.5	7.5	65,215,131
1938	92.8	7.2	57,154,947
1939	87.9	12.1	74,987,529
1940	85.6	14.4	85,893,351
1941	83.1	16.9	59,879,832
1942	72.7	27.3	49,908,381
1943	69.6	30.4	53,885,223
1944	60.9	39.1	70,185,231
1945	58.3	41.7	88,978,464
1946	57.9	42.1	93,887,871
1947	67.7	32.3	117,468,708
1948	65.2	34.8	139,681,953
1949	51.7	48.3	141,700,593
1950	50.0	50.0	174,794,436
1951	40.3	59.7	157,326,462
1952	35.2	64.8	179,416,593



These curves of tuna landings in California reveal that the industry operates throughout the year, but that the summer months provide the greatest concentration of fish deliveries and cannery activity. During the early months of the year much of the material for cannery operations is received frozen from foreign sources.

Salt and Oil in Tuna

Can Size:	Fill-in Weight of Fish, Ounces	Salt Added, Ounces	Salad Oil Added, Ounces
¼-lb tuna	3½	1/14	¾
½-lb. tuna	5¾	1/7	1½
1-lb. tuna	11½	2/7	2
4-lb. tuna	46	6/7	9

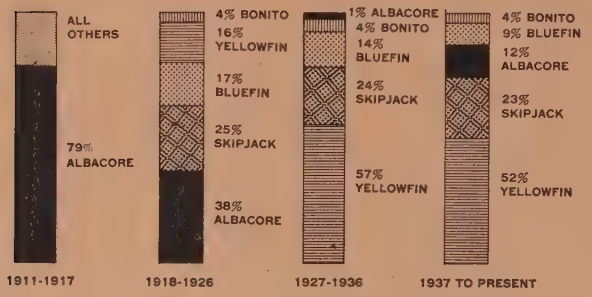
The Function of Oil In Canned Tuna

A bland vegetable salad oil is always added to American canned tuna. Originally, olive oil was used; but this was supplanted later with cottonseed oil, which proved more to the liking of the average American consumer.

During World War II it became difficult to secure sufficient stocks of cottonseed oil for tuna canning and soya bean oil and corn oil were frequently used. The soya oil proved particularly satisfactory for the purpose, and soon came to dominate the field. Virtually the entire pack is now canned with this additive.

It should be noted that present labelling requires that the actual source of the oil be stated on the label. Where "Canned in salad oil" formerly was acceptable; "Canned in soya bean oil" is now required.

PERCENTAGE OF EACH KIND OF TUNA IN CATCH DURING DIFFERENT PERIODS OF DEVELOPMENT OF WEST COAST TUNA FISHERY



The oil added to tuna in canning has two purposes:

1. To moisten the meat and replace in its structure the rather strong, fishy oil removed in precooking;

2. To lubricate and insulate the surfaces of the fish in contact with the tin, and thus to prevent "scorching" during the process cook. This "scorching" is a technical term for the development of an over-cooked flavor, sometimes accompanied by light browning, and does not mean actual scorch-blackening of the fish.

Tuna Tariff History

Tariff on tuna canned in oil was set at 30% ad valorem by the Tariff Act of 1930. This duty was raised to 45% in 1934 to equalize differences in domestic and foreign costs of production.

In 1943, under terms of the trade agreement with Mexico, this rate was reduced to 22½%. Termination of that trade agreement in 1951 let the rate rise again to 45%, where it stands at time of writing.

The tariff act provided that fish "not otherwise specified" and not canned in oil should be dutiable at 25%, and this rate was subsequently reduced to 12½% by trade agreement. Tuna and bonito are held to come under this rate when they are canned with addition of oil, and this loophole was seized upon in the early '50s as an opportunity to send tuna into the United States at a duty of 12½% instead of the 45% rate taken by the same product when packed with the addition of oil.

Frozen tuna is bound on the free list and enters the United States without payment of duty.

Several efforts have been made to secure changes in the tuna tariff picture, but without avail. Determined efforts were made by American fishermen to secure a duty on imports of frozen tuna; and operators similarly sought to equalize the tariff on tuna canned in brine with that borne by tuna in oil. At time of writing the Tariff Commission has rejected all such petitions.

Conversion for Standard Cases

Product:	Pounds Per Case
Salmon	48
Sardines:	
California	45
East Coast	20.3
Tuna:	
Fancy and Standard	21
Flakes and Grated	18
Mackerel	45
Herring	45
Shad	45
Fish Flakes	42
Shrimp, wet pack	15
Clams	15
Clam Chowder, etc.	30
Crabs	19.5

Tuna Import Trade

Imports have supplied a substantial portion of the tuna consumed in the United States for many years, coming into this country frozen for canning here, or in canned form ready for sale.

Percentage of the market supplied by imports of both types before World War II ranged from 13 to 18%. During the war years, with Japanese imports suspended, the domestic producers supplied all but 1 to 5% of the market.

Following the war, with the resumption of imports from Japan on a far larger scale than ever before, and with the rise of the South American canning industry, percentage of tuna imports to domestic production rocketed until in 1952 the imports accounted for 33.3% of the apparent consumption.

A remarkable feature of the current export trade has been the astonishing rise in the volume of tuna canned in brine. In 1952 this type of canned tuna amounted to more than four times the volume of the imports of tuna canned in oil.

Imports of Bonito

	Case Pack in Oil	Case Pack in Brine	Total Case Pack
1948	18,571	....	18,571
1949	385,666	23,809	409,475
1950	387,381	80,952	468,333
1951	497,000	95,238	592,238
1952	657,714	95,238	752,952

Note—Some minor quantities of Yellowtail included.

How Does "Lightmeat" Differ from "Whitemeat"?

Tuna in tins is always either "lightmeat" or "whitemeat," depending upon the species of the fish from which the pack was made.

Only Albacore tuna can produce the "whitemeat" pack. This species has the whitest flesh of all the numerous species of tuna, and to it is reserved the "whitemeat" designation.

"Lightmeat" tuna more often than not is packed from the Yellowfin species, which is the most abundant among all the kinds of tuna. However, United States practice permits Skipjack, Bluefin, Big-Eye and Little tuna all to be labelled "lightmeat." They are closely similar in color, structure and flavor, and the average consumer probably would have real difficulty in distinguishing between them. As they are labelled identically, so they usually are priced the same; although packers customarily code them separately and use the packs in markets which have come to prefer the minor distinctions.

Tuna in Brine Takes A Low Rate of Duty

Within the past few years tuna packed in brine, without added oil, has been marketed widely in the United States, where it has achieved acceptance on the basis of price in a market which previously had used only tuna canned with the addition of a bland vegetable oil.

All tuna-in-brine offered in the United States is imported, largely from Japan, although minor quantities may have come from South America.

This product was developed and offered in the United States following the war in order to avoid the 45% duty on imports of tuna canned in oil. By a peculiar quirk of the United States tariff law, this duty is levied on tuna only if it is canned in oil. Tuna canned in brine comes under a generalized category which takes only 12½% duty. Thus the large saving in duty, plus a minor saving in the cost of oil, permits imports of tuna-in-brine to be sold in the United States at prices sufficiently below those for standard tuna to make the item acceptable to price-conscious and calorie-conscious consumers.

How Salmon Goes to Market

Shipment by Steamer

During the principal packing season in Alaska excellent steamer service is maintained, and the salmon is loaded out of the canneries without delay. However, a ship must take cargo from several plants and several ports, and this takes time.

Moreover, shipments from Alaska to Seattle during the producing season will run from 100,000 to 250,000 cases. Discharge of this quantity of salmon, picked up from many different producers, necessarily requires considerable time, for each lot must be segregated as to the packer and species. Each "code" owned by each packer is kept together if it is at all possible.

Labeling and Casing

Due to the extreme speed with which salmon must be packed during the peak periods in the Alaskan runs, and to the uncertainty of label requirements until the goods are sold, a large percentage of the salmon packed in Alaska is not labeled and finally cased until after it has reached Seattle and been inspected.

Crews of trained workmen do the labeling, removing the salmon from the cases, running them through labeling machines, marking and sealing the cases. A crew can handle about 100 cases per hour.

Congestion at the steamer terminal during periods of heavy shipment and the demand for trained crews necessarily produces some delays in getting the goods ready for shipment even after they have been inspected and passed.

Another common cause of delay in connection with shipment of parcels to carry buyers brands is delay in receiving the labels, which also occasionally need trimming to fit the cans, or imprinting, and this occasions further delay.

Loading and Shipping

Proper loading and securing of canned salmon in rail cars is a specialized operation, just as is labeling; and loading has become increasingly complicated with the growth of pool cars and stop-over cars, with their different labels and species to be carefully segregated.

Salmon sellers normally reserve the right to name the originating rail carrier. In most instances a 60,000-lb. car is required to take the carload rate, but for Group A territory the minimum is 70,000 lbs.; and for Group B it is 77,000 lbs.

Canning is Identical

The canning process for all varieties and grades of salmon is exactly alike in its fundamentals. Save for hand-butchering and hand-filling, as discussed elsewhere, there is no material difference in salmon-canning methods.

The difference in the color of various lots of canned salmon is due to natural distinctions between species, in areas and seasons, does not result from the packing process, and cannot be influenced by it. Chums and Reds are packed by exactly the same method, on exactly the same machines, but they look very different when the can is opened.

Imports of Canned Salmon

In Pounds

Year	Canada	Other Countries	Total
1950	416,047	3,078	419,125
1951	528,716	39,329	568,045
1952	9,480,040	64,117	9,544,157

Canned Salmon is A Natural Product

Almost all salmon is canned as a "natural" product—packed in the cans and processed as Nature made it, with removal only of the heads, tails, fins and viscera. In the regular pack it thus includes the skin and bones—softened and made edible by cooking—and the natural oil and juices drawn from the flesh by cooking in the sealed can. Nothing whatever is added except salt for seasoning.

Some of the higher-priced packs receive the addition of extra salmon oil, produced expressly for the purpose by highly sanitary methods. Some special packs are also flavored by smoking or "kippering" the fish; and experiments have been made with other flavoring substances. In all cases, under federal and state laws, the addition of any substance—even salt, or extra oil from the same fish—must be indicated on the label.

CANNED SALMON BRAND ADVERTISING DISTRIBUTION BETWEEN MEDIA — WEIGHTED BASIS

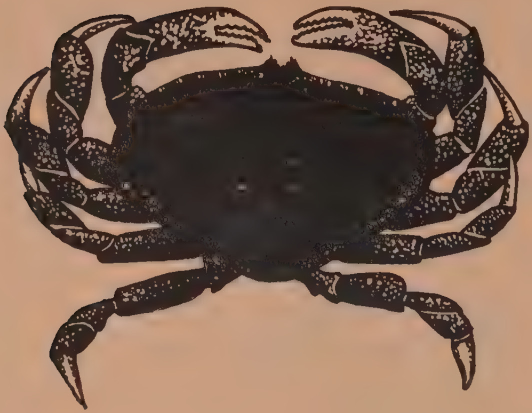
Media	Percent	Amount
Newspapers	48.1	$237,614
Magazines	10.6	52,364
Radio	17.1	84,474
Television	2.4	11,856
Billboard*	10.3	50,882
Other Media†	11.5	56,810
Totals	100.0	$494,000

NOTE—Data are for both the United States and Canada, and do not include advertising by buyers or local distributors for which allowance has been made by canners.

*Includes car cards.

†Includes unbilled publicity, point-of-sale material, recipe booklets and folders, dealer and display helps. etc.

Dungeness Crab



How Crabs are Canned

Legal size limits restrict commercial crabs to those measuring from 6 to 6½" across the shell. Significantly, crabs grow very slowly after reaching this size.

Pacific crabs are always kept alive until they are prepared for canning. They will live for a considerable period out of the water, and upon delivery by the fishing vessels are placed in live boxes at the cannery until required.

Crabs for canning are killed and dressed, and the legs and body-meat sections—sometimes called "shoulders"—are given a preliminary cook in boiling water for a period of 20 minutes. This serve to firm the meat so it can be removed from the shell.

"Shakers," generally women, use small mallets or hardwood billets to break the shell from ends of the leg or "shoulder" sections containing the meat. These sections are then shaken, or rapped sharply on the edge of the box or pan provided for handling the crabmeat. Leg meat and body meat is customarily separated at this point by shaking into different containers.

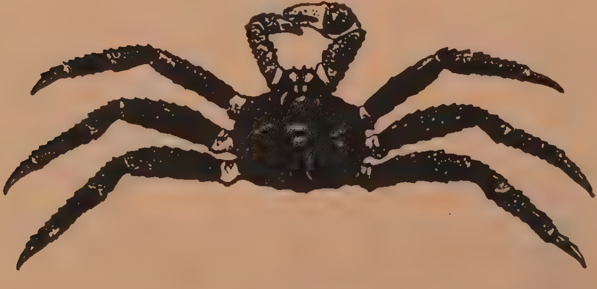
Only about 27% of the live weight of the crab is recovered as meat available for canning.

The pans or boxes in which the crab meat is handled at this point—and all utensils or surfaces it subsequently touches—are customarily of stainless steel or Monel. These alloys are used to prevent contamination, eliminate corrosion, and to provide easily-sterilized equipment.

Crab Packing Process

After removal from the shell, the crab meat is carefully inspected to detect shell fragments, which may also be removed by a brine-flotation process.

King Crab



After being freed of shell fragments, the crabmeat is usually dipped for a period of about one minute in a dilute solution of an edible acid, usually citric, although other food acids such as lactic or acetic are sometimes used. This process serves to prevent color changes in the crabmeat after canning. After the required time for color-fixing by acidulation, the crabmeat is thoroughly washed to remove acid. General practice is to dip the washed meat in salt brine for a few moments for seasoning, although some packers add about ¼-oz. per half-lb. can, omitting the brine seasoning.

Crab cans are always lined with "C-enamel," seafood formula.

Crab packs range from all leg meat to all body meat, with the great majority of the production consisting of a standard pack in which a layer of leg meat is placed in the bottom of the can, then body meat, and the fill topped-off with legs.

Filled cans are customarily sealed under vacuum and then given the process cook.

Crab Canning Data

	Put-in Weight,	Standard Process Cook	
Can Size:	Ounces	Minutes	Degrees
Half-flat	6.5	90	221
Pound Flat	13.0	80	228
No. 2	17.0	80	228

King Crab Facts

The King crabs — there actually are three closely related species — have furnished by far the greater part of the world's canned crab supply in the past. Prior to World War II, King crab canned in Asiatic waters by the Japanese and Russians constituted approximately 90% of the canned crab supply available in the American trade.

The King crabs are found along the Asiatic side of the Pacific from the Japanese islands north to Bering Sea, and particularly along the coasts of Kamchatka.

King crabs also abound on the American side of Bering Sea, along the Aleutian Chain, and the Alaska Peninsula. Exploration has also shown them fairly abundant as far eastward as Kodiak Island and Cook Inlet.

This crab differs from other species used for food in that the length and size of legs is disproportionate to that of the body. The ratio of leg meat to body meat is much greater, and the meat is pure white, marked with bright red coloration.

King crabs in American operations are taken in large degree by means of trawling and "pots."

The canning operation does not differ in material degree from that used for Pacific crabs.

However, a comparatively small part of the American King crab catch is canned, as American producers have found ready market in the United States for King crab in frozen form, either in packages or frozen in the shell.

New Crab Can Size Virtually Standard

Early years of the 1950s decade produced a notable change in the can size used for packing the vast majority of the Pacific canned crab.

This was the adoption of the "6½-oz." or "tuna-size" can as the dominant package, replacing the "standard half" which had been used previously. By the time this was written, the new package had virtually displaced the older can, and operators predicted that within a short time the switch would be 100% accomplished.

The new tin bears in its contents declaration on the label "6½ ounces", which is the "put-in" weight, as compared with a "put-in" weight of 7½ oz. for the "standard" can.

Various Canned Clams

American clam canning centers largely on the Atlantic Coast.

On the Pacific Coast the "razor" clam is the dominant variety—although some hardshell clams are also canned.

"Razor" clams are found nowhere in the world except along the Pacific Coast from Oregon to the Aleutian Islands, wherever there are extensive sand beaches exposed to the ocean surf.

Canning of this distinct variety of clams is confined to limited areas in Oregon, Washington, British Columbia and Alaska.

The razor clam is large in size, bland in flavor, and characterized by the whiteness of its flesh. The clam is carefully dressed before canning, and is usually packed minced.

Because of the relatively small quantity canned annually—both the Washington and Alaska packs being limited by legal quotas—distribution of razor clams is largely confined to the Pacific Coast market, where the product is best known and best regarded.

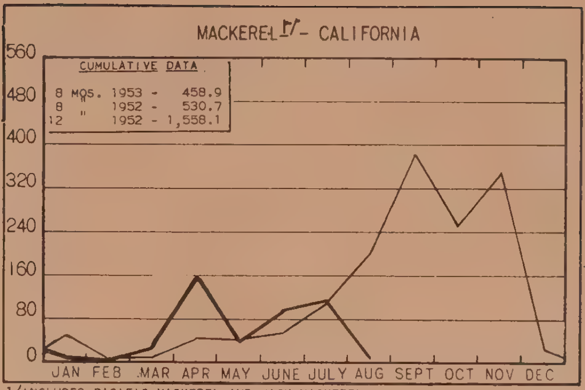
Dungeness or Pacific Crab

This species, scientifically **Cancer magister,** is the principal commercial crab of the Pacific Coast. It takes its frequently-used name "Dungeness" from a small fishing village on the Strait of Juan de Fuca, where crab fishing was formerly of importance.

Centers of the fishery for the Pacific crab are: San Francisco and Eureka, Calif.; Coos Bay, Yaquina Bay and the Columbia River, Oregon; Grays Harbor and Puget Sound, Wash.; Queen Charlotte Islands, B. C.; Southeast Alaska and Cordova, Alaska.

Crab canning is important in all of these centers save San Francisco, where the entire production is taken by the fresh market.

Crab canning usually starts about the first of the year, although occasionally a little packing may be started as early as mid-November.



1/ INCLUDES PACIFIC MACKEREL AND JACK MACKEREL.

Only the male crabs are retained by the fishermen, females by law being returned to the water unharmed.

Most Pacific crabs are taken in "pot" traps with tunnel entrances.

Most crab fishing is done at sea, beyond territorial waters.

1953 CANNED TUNA ADVERTISING DISTRIBUTION BETWEEN MEDIA —WEIGHTED BASIS

Media	Percent	Amount
Newspapers	27.6	$1,024,236
Magazines	11.9	441,609
Radio	10.9	404,499
Television	26.8	994,548
Billboards	6.9	256,059
Other media	15.9	590,049
Total	100.0	$3,711,000

NOTE — Data from original sources, compiled specially for this study. Data does not include advertising by buyers or local distributors for which allowance has been made by canners.

Pacific Oysters Different

Canned oysters packed on the Pacific are fundamentally different from those produced on the Atlantic and Gulf coasts because the Pacific oysters are a distinct species—originally imported from the Orient.

Pacific oysters grow much more rapidly, and to much larger size, than do Eastern oysters. Pacific oyster canning practices also varies sharply, and the canned product is very different in size of oyster, color, texture and flavor.

Most Pacific oysters for canning are now **opened fresh,** and are not steamed open as in the older process. After being hand-opened without first being steamed, the Pacific oysters are graded for size and prime condition; and then are "blanched" for a few moments in hot water to firm the meats before they are weighed into the can, which is then filled with hot brine, closed and processed.

Due to the fact that they have not been subjected to high temperature before being sealed in the can, Pacific oysters are not shrunk and toughened, and substitute perfectly for fresh oysters in any cooked dish.

Vitamins in Canned Fish

Canned fish generally are excellent sources of the rarer vitamins.

Vitamin A is perhaps the most important of the vitamins found in fish, but as it generally is concentrated in the liver oils or those occurring elsewhere in the viscera, no great amount is found in canned fish generally. Canned fish roe, on the other hand, is regarded as a good source of this vitamin.

Vitamin B_1, which protects against beri-beri, is found abundantly in oysters and in canned fish roe.

Vitamin D protects against rickets, and was the first of the vitamins to be found in fish. It was this factor which was sought in cod-liver oil long before vitamins were recognized and designated. The body oils of a number of the fishes canned supply Vitamin D, the number including salmon, sardines and herring.

The oil from some species of canned salmon has been found to have as good Vitamin D potency as the best cod-liver oil.

Pellagra is another nutritional disease which is prevented by the vitamins present in canned fish.

ESTIMATED DIRECT ADVERTISING EXPENDITURES OF THE TUNA PROCESSING INDUSTRY

Year	Direct Advertising, dollars	Value of Production, dollars	Percent advertising cost is of product value
1946	682,409	59,136,823	1.2
1947	787,937	90,609,175	.9
1948	1,039,738	112,612,296	1.4
1949	1,522,101	97,710,325	1.6
1950	3,082,798	112,830,094	2.7
1951	3,233,097	99,046,206	3.3
1952	3,660,000	99,046,206	3.3
1953	*3,711,115	N.A.	N.A.
Totals	17,719,195	†684,945,752	†2.1

NOTE—Does not include advertising by buyers or local distributors for which allowance has been made by processors. Source: U. S. Fish and Wildlife Service, except item marked (*) which is the result of the current survey by this journal.
(†)Seven-year total.

Ready-to-Heat Canned Fish Products Appear

Significant growth in the offerings of prepared "dinners" of canned fish products, ready-to-heat-and-serve was evident in the mid-Fifties, with tuna-and-noodles the most widely distributed of the introductions.

Salmon croquettes, produced in British Columbia, were a distinctive item of this type, being formed into cakes and pre-fried before being canned.

Salmon "dinner", combined skinned salmon in bite-size pieces with bits of macaroni and green peas, was introduced to the American market in the late fall of 1953.

With a broad base of interest, and growing consumer acceptance, the prospect for expansion of the production of such convenience items was considered good by close students of the market.

Salmon Price Differences Reflect Consumer Favor

Differences in market price between the species of salmon result mainly from consumer preference—based principally on color and oil content; and from the natural abundance of the respective varieties as related to consuming demand, with little or no distinction as to nutritive value.

In certain localities, however, some species are more highly colored or richer in oil than in others and perhaps enjoy long-standing reputation, resulting in distinctions, as between Columbia River Chinooks and Alaska Kings, or Puget Sound Sockeyes and Alaska Reds. Sometimes such distinctions are the basis of substantial differences in price, sometimes merely in relative salability.

Seasonal variations also occur, the earlier pack of some species being preferred to the later; as summer to fall-pack Chums, or spring to fall Chinooks.

Salmon of all species show little variation in food value. Except for specialty items, all are canned by exactly the same methods, procedure and equipment, and are handled with equal care. Thus the lower-priced salmon packs are **not**, as many have supposed, inferior or less carefully prepared fish of the same kind but are actually **different** varieties from the more expensive.

New Standard Shipping Weights for Salmon

Revised standard shipping weight agreement for canned salmon was reached late in 1953 between the railroads and the principal primary market shippers.

The new agreement calls for figuring all canned salmon shipped in cases of 48 No. 1 tall cans at a gross weight of 60 pounds per case. Similarly, cases of 48 halves are figured at 32 pounds per case.

This is a slightly reduction in the standard weights previously used, and takes into account the very large percentage of salmon currently shipped in corrugated cases in place of the heavier solid fibre previously used.

Evolution in Sizes Of Cans for Salmon

Canned salmon can sizes have been passing through a period of revision in the four years since the first edition of this **Canned Fish Hand-i-Book** appeared.

The mostly notable actual change has been the adoption by a number of packers of fancy salmon of the "tuna size half" for their product. The net weight of salmon in this can is usually stated at 6½ ounces.

Adoption of the "tuna size half" for salmon was first noted on the Columbia River, but in the 1953 season it was used by at least one Alaska operator for a pack of considerable size.

The year 1953 brought another innovation in salmon can sizes which may prove of long-range importance.

This was the packing of several thousand cases of Cohoes and Pinks in a 12-oz. tall can by a leading Puget Sound operator. This can is the same diameter as the No. 1 tall, but shorter.

Quantities of salmon packed in 2-lb. and 4-lb., particularly the latter, cans have grown in recent years and these institutional items have become a factor of some consequence in merchandising salmon. Interestingly, they usually take a slightly higher price than that quoted for identical goods in No. 1 talls.

Function of Vacuum

Vacuum in canned fish has several definite functions. It keeps the ends of the cans concave, which is a good index of the condition of the contents. Although convex or bulged ends are not necessarily the result of spoilage in the can, they well **may** be. Collapsed or concave ends on a can are evidence that there is no condition in the can generating pressure.

Vacuum in the can serves also to prevent unnecessary strain on the can during processing; and a third function is its effect in reduction of chemical activity in the can by reduction of the oxygen content in the headspace.

Vacuum is established in the can either by heating immediately prior to sealing the can—which serves to drive out entrapped air, and to produce a vacuum when the contents shrink upon cooling; by exhausting the air by means of mechanical pumping; or by means of a steam blast at the moment of closing.

Adequate vacuum is particularly important in the case of canned fish which is to be shipped to or through the tropics or high altitudes. Where vacuum is inadequate, such conditions may produce bulged ends which may not return to normal condition later.

Pacific Anchovies Differ in Packing

The only difference of consequence between the Pacific anchovy as caught in California waters and that packed in Europe is in the style of canning and curing. The fish is of the same family, and closely similar.

Due to the high labor costs involved in the European style of anchovy packing, American operators have not been able to compete costwise; and accordingly have packed their anchovies almost exclusively in the "sardine style" long familiar to the American market for California sardines. In general, this involves canning the anchovies in tomato sauce following a pre-cook in which a substantial portion of the oil and natural moisture has been removed from the fish.

California anchoives are canned principally in "half-pound square" cans; although some substantial packs have been made in round cans of varying heights.

Potential available for future development is recognized as substantial in anchovies, of which large schools occur along the coast of California and north to Puget Sound.

Women workers in a California cannery hand-filling square cans with anchovies, which are delivered from the machines which dress and wash the fish.

Hook-and-Line Fishing

Salmon fishing by means of hook and line is relatively unimportant in the matter of volume of production as compared with gillnetting, trapping and purse seining.

Moreover, the percentage of hook-caught salmon which is canned is very small. This method of fishing is used primarily to take salmon for the fresh, frozen or cured fish trade; and only a very small proportion of fish caught in this manner is marketed in tin.

This is due to the fact that when a salmon strikes the hook he is feeding, and the physical condition of the feeding fish lends itself better to marketing fresh, frozen or cured than it does to canning.

In some instances, notably in the case of Cohoes or Silvers, hook-caught fish may be canned, and are well esteemed in that form.

Hook-and-line fishing for salmon is called "Trolling." The fish are taken at sea on large "spoon hooks" or "plugs." These latter are merely an over-sized adaptation of the bass plug of the sport fisherman.

Handling of Samples

With a very few exceptions, the structure of canned fish and seafoods can be damaged by rough treatment in shipping. This is particularly true where samples are shipped by parcel post, or by truck.

Samples may suffer sharp de-grade if they are roughly handled a short time before opening. While such adverse effects can be overcome to some extent by permitting the cans to rest for a time, marked structural damage to the canned fish may result.

Such damage can be particularly serious in the case of very fat fish, or of fish in which there is a good deal of moisture in the can, as in shad or mackerel.

Prospect for Return Of California Sardine

With the virtual disappearance of California sardines from the fisheries which had produced them in enormous quantities for many decades, research agencies of California and the U.S. Fish and Wildlife Service, together with private and educational scientific agencies in California, merged their research efforts to seek a solution for the problem.

This sardine study currently constitutes perhaps the most extensive biological study in the world. From its early findings it becomes apparent that the commercial disappearance of the California sardine resulted from the failure of the species to produce truly successful spawnings over a period of more than the normal life of the kind. This condition, plus the extremely heavy fishing during the war years, brought the sardine population below the level permitting commercial operations.

Eventual recovery to its former status as the United States' largest fishery is regarded as certain—someday. However, at time of writing the research agencies had not detected a successful spawning, and accordingly could not forecast a resumption in upward trend of abundance.

Function of Headspace

The distance between the top of the contents of a can of fish or seafood and the underside of the can lid, measured in sixteenths of an inch, is called the headspace. It has a definite function in canning, as a deficient headspace may result in lack of adequate vacuum; while too much headspace results in a slack-filled can, even though the net weight of contents may be up to that stated on the label.

A headspace of 3/16 in. is considered about right for the great majority of canned fishery products.

Canned Salmon Duty 15%

Tariff on canned salmon was reduced from 25% ad valorem to 15% under recent revision of the reciprocal trade agreement with Canada.

The 25% duty had stood for many years.

Reduction of the duty to 15% facilitated some movement of canned salmon from Canada into the United States, but its effectiveness coincided closely with the rise of the Canadian dollar to premium pricing, which served largely to offset the effect of the tariff reduction.

Dietetic Canned Fish Output Grows Gradually

Gradual growth in the packing of "dietetic" canned fish—particularly tuna—is noted in Pacific production. This article is so pre-cooked as to remove the natural oil in the fish, and then is canned in distilled water without the addition of salt. Thus it is offered as a low-fat, low-sodium food for those requiring specialized diets of this type.

In some instances the product is offered only for the salt-free diet, with a low-fat fish which does not need special preliminary processing.

Early rather free labeling practices with respect to "dietetic" products have recently been corrected by definitive rules of the Food and Drug Administration applicable to products of this sort.

North Pacific Treaty May Affect Fisheries' Future

With 1954 the United States, Canada and Japan put into operation a "tripartite" treaty for the conservation of the high-seas fishery resources of the North Pacific. The countries under this convention accept certain principles, and establish a commission to apply them in keeping with scientific findings produced by the commission's researches.

This treaty and its operation may be expected profoundly to affect the future of the fisheries of the Pacific, salmon in particular.

In brief, the nations signatory to the treaty agree to the principle that, where conditions outlined below apply, the nations should "abstain" from fisheries meeting the conditions. These conditions for "abstention" are:

1. A fishery is already fully exploited by one or more signatory nations.
2. It is under scientific study to determine its condition and biology.
3. Its exploitation is being regulated in the interest of conservation of the resource.

Under the terms of the treaty, the Japanese accept the North American salmon, halibut and herring fisheries as meeting the conditions for abstention. Under this acceptance the Japanese agree not to fish for salmon to the east of the 175th meridian of west longitude.

Whether this line properly divides the stocks of salmon originating in Alaska from those native to the Asiatic coast is expected to be one of the first studies to be undertaken by the commission. If it is found that the 175th meridian does not effect a general division of this kind, the commission can recommend that it be moved to conform to the findings of its research.

Oyster Stew Advances Among Canned Products

Although Pacific oyster stew has been canned in a small way for a number of years, and nearly a quarter-century ago was the subject of a considerable development, only in 1953 did the product succeed in attaining the consumer acceptance anticipated by its earnest advocates.

Late in 1952 and through 1953, Pacific canned oyster stew made surprising gains, with the result that this product now is taking a very substantial part of the Pacific oysters available for canning.

While most of the oyster stew is canned with whole milk, some operators put the principal ingredients up as a "concentrate," with only diced oysters, butter and seasons, leaving the consumer to add the milk desired.

From the early volume attained by this product, some merchandisers believe that oyster stew may before many years become one of the leading items volume-wise among Pacific canned sea foods.

M. S. G. Shows Growth in Pacific Fish Products

Steadily growing employment of monosodium glutamate in Pacific canned seafood products is manifest, particularly with the growth of prepared dishes and specialty items.

Tremendous stimulus was given the use of this flavor-accenting additive when one of the largest tuna canners adopted it as a component of its leading tuna product.

Monosodium glutamate also is used universally in such Pacific prepared seafoods as fish canned with noodles, with macaroni and peas, in croquettes; and in oyster stew, smoked oysters, clam chowder and similar prepared products.

It is always declared on the label.

Confusion of Sardines Identity to be Cleared

Eventual clearing of the confusion surrounding the proper use of the term "sardines," and the identity of fish which may properly be labeled as such, is to be anticipated from action initiated by the Food and Drug Administration for the purpose of establishing standards of identity for canned sardines.

This has long been a perplexing problem for the industry and the Federal authorities as well. In general, the term "sardine" has been reserved by American usage for small fish of the herring — or clupeoid — family, packed whole, and generally after being treated to remove some of the natural moisture from the fish.

The questions as to when a herring is small enough to be a sardine, and just what fish belong to the herring family, provide points of argument which require careful consideration.

Confusion which characterizes this matter is revealed by the fact that in 1953 permission was given to pack herring above 9 inches in total length as "large" sardines, so long as the herring came from the Atlantic ocean. Those from the Pacific were denied the right to be sardines, even though only a scientist can distinguish one species from the other.

Seven Superb Seafood Specialties

Selected recipes of proven success, chosen for variety and their adaptability to seafoods of several sorts

Tuna Tetrazzini

2 6-oz. cans chunk style tuna
¼ cup diced pimiento
¼ cup chopped green pepper
1 can condensed cream of mushroom soup
Salt
½ 8-oz. pkg spaghetti
1 small onion, chopped
½ cup water
1¾ cups grated sharp cheese
Pepper

Break spaghetti into pieces and cook in salted water until tender. Drain. Put tuna, pimiento, green pepper, chopped onion in a casserole. Mix water and soup and add to tuna mixture. Add 1¼ cups cheese and the spaghetti. Season to taste. Toss lightly until well mixed and coated with sauce. Sprinkle with remaining cheese. Bake in a moderate oven (350°) for about 45 minutes. Four servings.

NOTE—Salmon can be used in this recipe in place of tuna for variety.

Salmon Shortcake

1 1-lb. can of salmon
¼ cup mayonnaise
2 tsp. chopped onion
2 tsp. chopped parsley
Chopped sweet pickle
Salt and pepper
2 cups flour
4 tsp. baking powder
½ tsp. salt
¼ cup butter or margarine
1 egg, beaten
½ cup milk
Cheese sauce

Sift the flour, baking powder, salt together. Cut-in butter or margarine. Blend beaten egg and milk with the flour mixture to form dough. Divide dough in two pieces. Roll each to 1/3 in. thick, making two circles size of a 9-in. pie tin.

Filling—Toss together the salmon, mayonnaise, onion, parsley and pickle. Season to taste.

Place one circle of dough on a greased baking sheet, or in pie tin. Spread with filling and cover with second dough circle. Bake at 425° for 20 minutes.

Serve with a rich cheese sauce, made by melting ¼ cup cheese in a double boiler and blending with ¼ cup milk.

This recipe can be made very satisfactorily by using a biscuit mix for the dough, making it according to the shortcake recipe on the package.

NOTE—This recipe is equally successful when tuna is substituted for salmon.

Pacific Hangtown Fry

1 can Pacific oysters
4 slices bacon, diced
Pepper
Monosodium glutamate
4 eggs
2/3 cup milk
Onion salt

Brown diced bacon in frying pan. Pour off two-thirds of bacon fat. To remainder of fat and diced bacon add diced oysters, season with pepper and onion salt. Brown lightly. Then cover diced oysters and bacon with mixture of eggs lightly beaten in milk, with 1/3 cup of the liquor from the canned oysters, and a generous pinch of monosodium glutamate. When sides of egg mixture begin to set in the pan, remove from burner and finish cooking in 400° oven with the broiler element on. Remove as it firms. Serves two.

NOTE — Recipe **must** be made with Pacific oysters where canned oysters are used.

Salmon Autumn Loaf

(Featured recipe developed by Canned Salmon Inc.)

1 1-lb. can salmon
2/3 cup evaporated milk
2 cups soft bread crumbs
1 egg, well beaten
1 tbsp. minced parsley
2 tbsp. minced onion
½ tsp. salt
¼ tsp. poultry dressing, optional
¼ tsp. Tabasco

Turn canned salmon with liquid into mixing bowl; add evaporated milk and bread crumbs. Mix with a fork until well blended. Add egg and remaining ingredients; mix well. Turn into a well greased loaf pan 7½x3½x2½ inches. Bake in a moderate oven (375° F.) 40 minutes, or until center is firm. Serve plain or with lime or lemon wedge or with Cream Pea Sauce. YIELD: 6 servings.

Tuna Lima Loaf

(Featured National Tuna Week Recipe of Tuna Research Foundation.)

2 7-oz. cans of solid-pack tuna, drained
1½ cups of cooked large dry lima beans
½ cup finely chopped onion
1/3 cup pickle relish
¾ cup dry bread crumbs
¼ cup milk
1 tsp. salt
2 tbsp. lemon juice
3 beaten eggs
¾ cup shredded American cheese

Flake tuna. Drain lima beans and chop coarsely. Combine all ingredients in bowl, adding eggs last. Mix well. Put in greased loaf pan or shape in shallow baking pan. Bake in moderate oven (350° F.) 50 to 60 minutes. Serve with hot tomato or egg sauce. Makes 8 servings.

Mackerel Loaf

(California sardines, natural style, can be substituted for mackerel.)

1 1-lb. can of mackerel
1 can condensed cream of mushroom soup
2 tbsp. chopped onion
½ tbsp. salt, pepper
2 cups day-old bread, cubed
3 eggs
2 tbsp. chopped parsley
Few drops Tabasco

Cut bread into tiny cubes. Add liquid from the mackerel, slightly beaten eggs, soup, parsley, onion and seasonings. Fold in mackerel, broken into chunks. Put into a greased loaf pan and bake in a moderate oven (375°) for about one hour, or until firm. Serve hot with egg sauce. (May be baked in a ring mold, and served with center filled with creamed vegetable.)

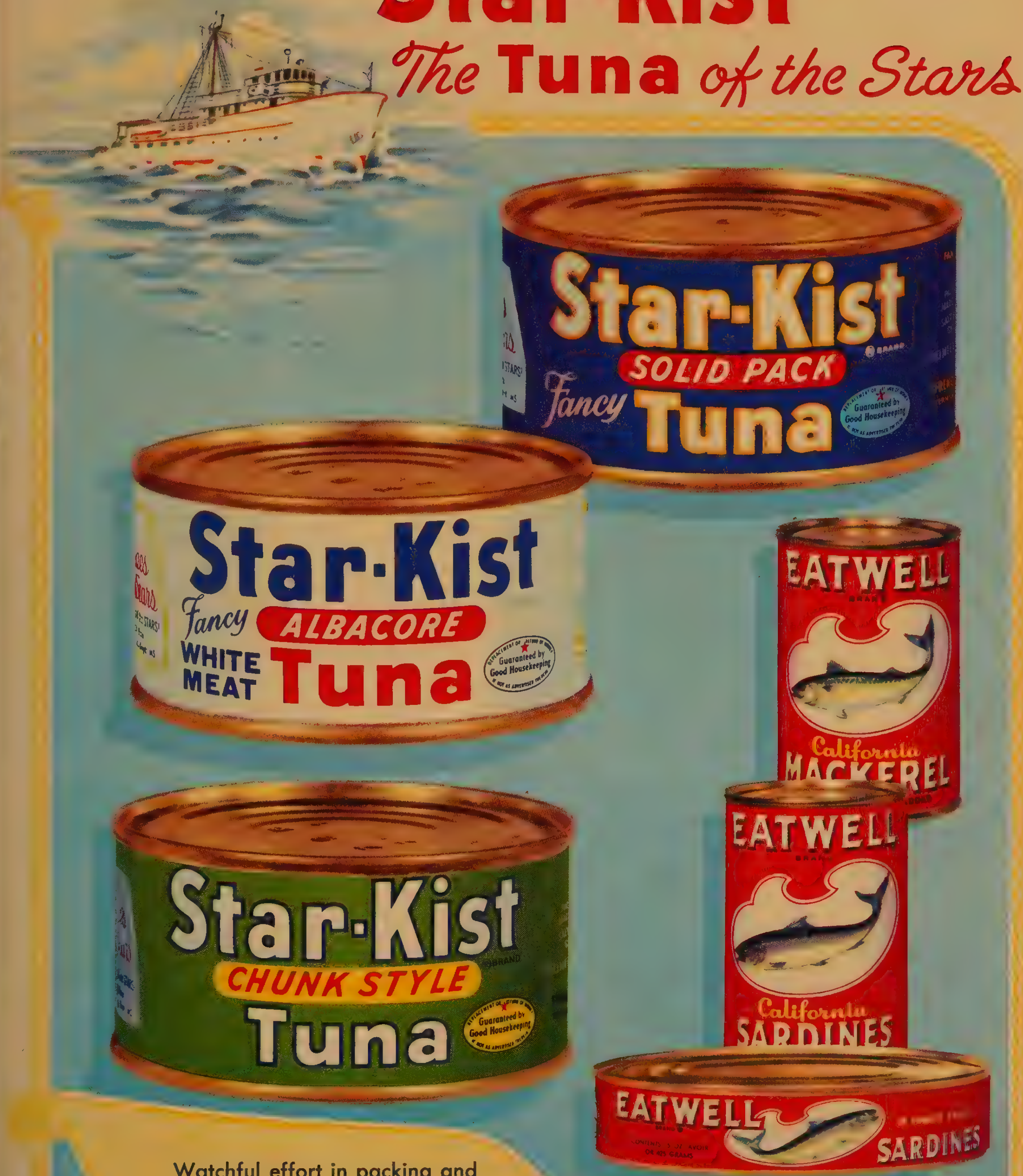
Pacific Crab Soufflе

No. ½ can of crabmeat
1 tbsp. butter
1 tbsp. flour
1 tsp. lemon juice
2 eggs, separated
Salt and pepper
1 cup milk

Flake crab meat. Make a white sauce by melting butter, blending in flour, adding milk, and cooking to a smooth consistency. Remove from fire, add lemon juice and crab meat. Add well beaten egg yolks, season to taste, and then fold in stiffly beaten egg whites. Pour into greased baking dish and bake 20 minutes at 400°.

Star-Kist

The Tuna *of the Stars*


Star-Kist
SOLID PACK
Fancy Tuna
Guaranteed by Good Housekeeping
Star-Kist
Fancy ALBACORE
WHITE MEAT Tuna
Guaranteed by Good Housekeeping
Star-Kist
CHUNK STYLE
Tuna
Guaranteed by Good Housekeeping
EATWELL
California MACKEREL
EATWELL
California SARDINES
EATWELL
SARDINES

Watchful effort in packing and testing has maintained our *"Flavor First"* standards of quality and is keeping our brands the most preferred of canned fish in America.

PACKED BY
FRENCH SARDINE CO., INC.
TERMINAL ISLAND CALIF. U.S.A.

Star-Kist Foods, *Inc.*

J. J. BOGDANOVICH
PRESIDENT

TERMINAL ISLAND, CALIFORNIA

New peak of production was attained by the American tuna canning industry in 1953 with a pack reaching 9,936,000 cases, about 700,000 cases higher than the record set in 1952.

Principal gain was in California, particularly at San Diego, with the production in states outside California, including Hawaii and Puerto Rico, running well above 1,000,000 cases.

The American canning record was made possible by heavy imports of frozen tuna brought into the United States for canning.

TUNA CANNING in the United States fell short of the 10-million-case mark by less than 65,000 cases in 1953 as it rose to new heights.

To 2,804,200 cases of Albacore and 6,965,621 cases of lightmeat, the canners added 166,416 cases of tuna-like fishes for a grand total of 9,936,237 cases.

California accounted for 8,714,303 cases, with the Los Angeles Harbor plants well out in front with 5,552,272 cases, while San Diego with 3,074,734 cases improved its position substantially.

Pacific States and Hawaii contributed 1,039,202 cases; while the Atlantic Coast, including Puerto Rico, packed 182,732 cases, according to preliminary data.

1953-UNITED STATES TUNA PACK-1953

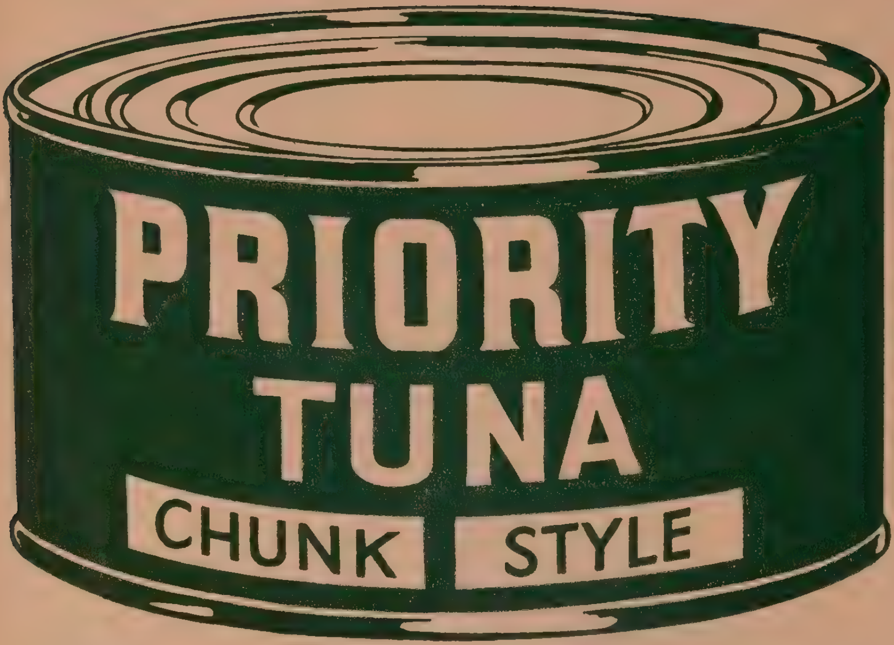
Region	(Cases) Albacore	Lightmeat	Standard Cases Total True Tuna	Bonito and Yellowtail	Grand Total
California					
San Diego	681,104	2,337,049	3,018,153	56,581	3,074,734
San Pedro	1,376,613	4,065,824	5,442,437	109,835	5,552,272
Monterey and San Francisco	87,297	...	87,297	...	87,297
Total California	2,145,014	6,402,873	8,547,887	166,416	8,714,303
Hawaii, Washington and Oregon combined lightmeat tuna	...	445,129	445,129	...	445,129
Oregon	542,597	...	542,597	...	542,597
Washington	51,476	...	51,476	...	51,476
Total Pacific Northwest and Hawaii	594,073	445,129	1,039,202	...	1,039,202
Total Pacific Coast	2,739,087	6,848,002	9,587,089	166,416	9,753,505
Total Atlantic Coast*	† 65,113	117,619	182,732	...	182,732
GRAND TOTAL U. S. TUNA	2,804,200	6,965,621	9,769,821	166,416	9,936,237

*Includes Puerto Rico.

†Includes some skipjack and little tuna

1953-IMPORTS OF CANNED TUNA-1953

Countries	Pounds Nov. 1952	Dec. 1952	Jan. 1953	Feb.	March	April	May	June	July	August	Sept.	Oct.	Total
ANGOLO, Total	8,549	13,968	5,150	...	6,923	20,080	17,624	34,438	25,664	49,350	3,515	...	185,261
In Oil	...	...	...	...	...	...	7,143	...	10,794	12,739	3,515	...	34,191
In Brine, etc.	8,549	13,968	5,150	...	6,923	20,080	10,481	34,438	14,870	36,611	...	...	151,070
JAPAN, Total	2,190,943	1,796,412	1,926,475	1,613,278	2,891,286	3,322,899	1,628,797	2,243,518	3,110,884	4,238,623	4,926,460	2,264,015	32,153,590
In Oil	369,378	228,382	373,815	277,762	688,688	980,139	219,375	243,685	202,370	276,972	285,171	142,977	4,288,714
In Brine, etc	1,821,565	1,568,030	1,552,660	1,335,516	2,202,598	2,342,760	1,409,422	1,999,833	2,908,514	3,961,651	4,641,289	2,121,038	27,864,876
PERU, Total	47,100	11,130	12,369	76,317	38,829	88,542	165,646	44,401	57,808	17,430	64,826	18,450	642,848
In Oil	...	11,130	...	33,443	20,979	88,542	126,461	6,900	1,950	1,950	...	...	291,355
In Brine, etc.	47,100	...	12,369	42,874	17,850	...	39,185	37,501	55,858	15,480	64,826	18,450	351,493
PORTUGAL, Total	...	3,278	2,094	...	...	16,560	33,223	61,758	8,334	17,927	19,539	16,776	179,489
In Oil	...	3,278	2,094	...	...	16,560	33,223	61,758	8,334	17,927	19,539	16,776	179,489
In Brine, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...
OTHERS, Total	3,673	5,988	5,581	27,720	12,625	22,939	17,796	53,357	62,385	154,321	127,758	217,462	711,605
In Oil	1,025	5,988	5,581	10,650	1,763	207	7,568	6,595	...	10,017	5,987	254	55,635
In Brine, etc.	2,648	...	...	17,070	10,862	22,732	10,228	46,762	62,385	144,304	121,771	217,208	655,970
Total	2,250,265	1,830,776	1,951,669	1,717,315	2,949,663	3,471,020	1,863,086	2,437,472	3,265,075	4,477,651	5,142,098	2,516,703	33,872,793

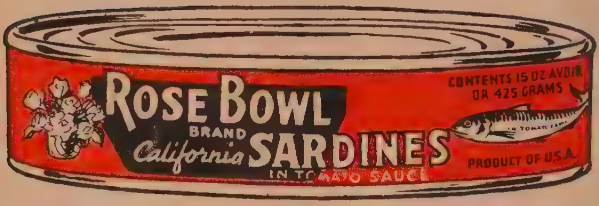

PRIORITY
TUNA
CHUNK STYLE

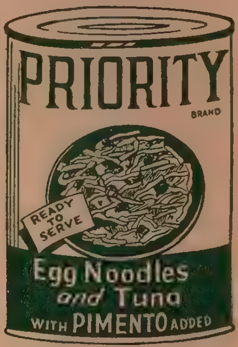
SETTING NEW STANDARDS for QUALITY and CONSUMER ACCEPTANCE

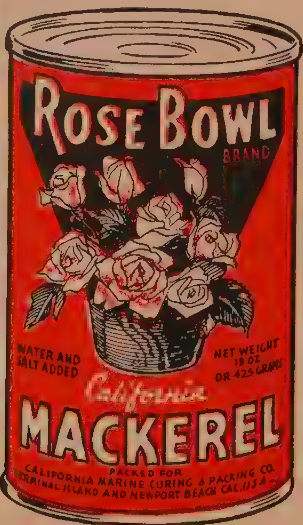
Easy to Remember!

Easier to Sell!

CALIFORNIA MARINE CURING & PACKING CO.


ROSE BOWL
BRAND
California SARDINES
IN TOMATO SAUCE
CONTENTS 15 OZ AVDP.
OR 425 GRAMS
PRODUCT OF U.S.A.


PRIORITY
BRAND
READY TO SERVE
Egg Noodles and Tuna
WITH PIMENTO ADDED


ROSE BOWL
BRAND
WATER AND SALT ADDED
NET WEIGHT 15 OZ OR 425 GRAMS
California
MACKEREL
PACKED FOR
CALIFORNIA MARINE CURING & PACKING CO.
TERMINAL ISLAND AND NEWPORT BEACH CAL. U.S.A.

TERMINAL ISLAND
CALIFORNIA
(LOS ANGELES HARBOR)

J. R. BARRY & CO.

EXCLUSIVE SALES AGENTS

338 CANNERY STREET
TERMINAL ISLAND CALIF. TE 2-6488

California Pack of Canned Tuna and Related Fishes

YEAR	Cases									YEAR
	SAN PEDRO DISTRICT				SAN DIEGO DISTRICT				GRAND TOTAL	
	Light Tuna	White Tuna	Other Tuna*	TOTAL	Light Tuna	White Tuna	Other Tuna*	TOTAL		
1912	....	....	....	....	....	....	....	....	75,900**	1912
1913	....	....	....	....	....	....	....	....	77,500**	1913
1914	....	....	....	....	....	....	....	....	217,000**	1914
1915	....	....	....	....	....	....	....	....	237,365**	1915
1916	315,880	82,593	6,457	404,930	71,062	13,593	245	84,900	489,830	1916
1917	382,273	118,769	11,928	512,970	140,563	17,261	12,746	170,570	683,540	1917
1918	228,241	82,801	87,110	398,152	50,129	....	73,072	123,201	521,353	1918
1919	487,812	144,383	65,008	697,203	62,318	47,869	24,572	134,759	831,962	1919
1920	668,012	‡	1,534	669,546	167,633	‡	1,623	169,256	838,802	1920
1921	72,410	255,194	...	327,604	27,869	82,157	48	110,074	437,678	1921
1922	334,733	166,496	3,651	504,880	129,349	27,269	23	156,641	661,521	1922
1923	312,187	209,591	17,803	539,581	224,315	88,014	4,869	317,198	856,779	1923
1924	134,497	278,855	113,401	526,753	27,207	106,958	11,382	145,547	672,300	1924
1925	323,422	358,940	116,149	798,511	187,909	95,007	11,936	294,852	1,093,363	1925
1926	380,074	43,660	150,185	573,919	188,649	14,578	56,280	259,507	833,426	1926
1927	381,541	105,598	231,751	718,890	436,700	20,916	30,368	487,984	1,206,874	1927
1928	473,868	99,093	128,374	701,335	473,704	658	21,581	495,943	1,197,278	1928
1929	394,819	130,212	146,104	671,135	700,020	2,426	55,284	757,730	1,428,865	1929
1930	658,728	143,748	130,159	932,635	950,461	1,783	35,510	987,754	1,920,389	1930
1931	394,668	144,796	85,653	625,117	543,536	177	10,303	554,016	1,179,133	1931
1932	385,399	52,215	88,112	525,726	606,608	....	15,655	622,263	1,161,151	1932
1933	341,290	49,391	71,388	462,069	877,124	....	52,980	930,104	1,392,173	1933
1934	714,546	82,182	116,526	913,254	982,547	....	31,509	1,014,056	1,927,310	1934
1935	808,578	107,501	230,772	1,139,851	1,222,894	4,648	109,323	1,336,875	2,476,727	1935
1936	840,151	53,849	153,107	1,047,107	1,392,531	35	147,509	1,540,075	2,587,182	1936
1937	881,208	83,123	260,016	1,224,346	1,680,720	8,036	105,211	1,793,967	3,018,314	1937
1938	697,804	265,034	233,766	1,196,604	1,282,571	24,355	95,202	1,402,128	2,598,732	1938
1939	982,225	281,666	262,367	1,526,258	1,633,113	46,372	70,917	1,750,402	3,305,297	1939
1940	1,110,181	122,484	315,778	1,548,443	2,045,071	19,304	251,623	2,315,998	3,868,394	1940
1941	554,782	73,024	235,910	863,716	1,372,594	10,145	274,643	1,657,382	2,530,169	1941
1942	594,056	128,670	97,901	820,627	1,164,524	104,578	146,234	1,415,336	2,242,220	1942
1943	554,928	187,052	234,382	976,362	699,099	227,347	394,265	1,320,711	2,308,415	1943
1944	805,081	125,632	270,821	1,201,534	760,263	307,806	537,889	1,605,958	2,809,177	1944
1945	825,377	148,286	503,118	1,476,781	1,518,646	329,251	128,686	1,976,583	3,456,442	1945
1946	1,170,791	141,629	646,615	1,959,035	2,023,870	233,622	332,529	2,590,021	4,555,397	1946
1947	1,317,016	104,726	733,587	2,155,329	2,576,804	145,300	418,797	3,140,911	5,357,498	1947
1948	1,264,615	290,811	771,182	2,326,608	3,096,315	462,255	406,248	3,964,818	6,346,952	1948
1949	810,362	289,063	1,458,374	2,557,799	2,967,150	535,013	449,413	3,951,576	6,590,396	1949
1950	1,024,410	586,683	2,673,668	4,284,761	1,412,220	482,894	1,961,297	3,856,411	8,141,172	1950
1951	3,143,863	580,377	77,229	3,801,469	3,015,164	409,819	10,260	3,435,243	7,530,264	1951
1952	4,204,207	1,002,020	196,453	5,402,680	1,742,124	626,944	34,234	2,403,302	8,102,842†	1952
1953	4,065,824	1,376,613	109,835	5,552,272	2,337,049	681,104	56,581	3,074,734	8,714,303†	1953

† Minor quantities of tuna canned in Monterey, San Francisco and elsewhere in northern California have been included in the grand total. Figures are for standard cases of 48 halves or equivalent. Figures for final year are temporary totals from official sources. Data for previous years have been corrected according to official statistics of the California Department of Fish and Game.

*"Other Tuna" through 1950 includes Bonito, Yellowtail, Flakes and Tonno. For 1951 and thereafter this column includes only Yellowtail and Bonito, Flakes and Tonno being included in other columns.

**No Segregation available prior to 1916. ‡ Included under other heads.

As 1953 opened Southern California's tuna industry was in good shape with the carryover of around 2,000,000 cases, dissipated almost before the brokers' conventions were over in February. The 1952 California pack was 8,072,243 cases. Tonnage used, including frozen tuna, was 179,763. The year 1953 tonnage, due to heavier raw imports, was around 183,000 tons.

Early in 1953, after a lengthy period of negotiation with canners for increase of raw price and other concessions, the American Tunaboat Association became a working cooperative. The 1952 price scale was: Albacore, $400 per ton; Yellowfin, $310; Bluefin, $300; Skipjack, $260; bonito, $195; yellowtail, $185 per ton. For 1953 the ATA—which retained its name in its new status as a cooperative—won a raise on Yellowfin to $320, and on Skipjack to $280 per ton. Bonito and yellowtail remained the same; Albacore, at opening of season was $400, rising to $450 at season's close. The Fishermen's Cooperative Association negotiated similar raw prices, and secured an increase for Bluefin to $310.

California tuna pack of 1953 in accompanying tables — 8,714,303 cases—includes approximately 500,000 cases of "unspecified" tuna products, such as "noodles and tuna", tuna paste, etc., which are included on the basis of gross cases, and are not reduced to standard cases on the basis of contained tuna. Such standardization would reduce the "unspecified" item to about 160,000 x cases.

During the early part of the year, West Coast Packing Corporation decided to abandon tuna-packing oper-

IMPORTS OF FRESH OR FROZEN TUNA

	(Pounds)									
	Costa Rica	Japan	Canal Zone	Canada	Mexico	Ecuador	Peru	Others	TOTAL	
1931	....	6,812,000	17,000	140,000	889,000	....	....	....	7,858,000	1931
1935	....	5,688,000	226,000	173,000	196,000	....	....	....	6,283,000	1935
1939	8,003,000	5,202,000	741,000	349,000	....	....	....	300,000	14,595,000	1939
1943	1,051,000	....	....	128,000	131,000	....	....	....	1,310,000	1943
1946	2,854,000	....	....	536,000	773,000	....	....	4,000	4,167,000	1946
1947	7,283,000	....	....	897,000	916,000	....	....	108,000	9,204,000	1947
1948	3,059,000	2,392,000	....	220,000	1,984,000	1,003,000	485,000	....	9,143,000	1948
1949	10,078,000	2,839,000	956,000	1,234,000	1,990,000	1,026,000	2,327,000	156,000	20,606,000	1949
1950	9,621,000	25,369,000	5,904,000	891,000	50,000	973,000	13,256,000	648,000	56,712,000	1950
1951	831,000	35,728,000	3,790,000	68,000	3,000	897,000	20,238,000	530,000	62,085,000	1951
1952	603,000	50,985,000	2,680,000	1,069,000	23,000	815,000	12,223,000	605,000	69,003,000	1952
1953	448,883	76,787,409	1,140,000	179,264	...	2,065,620	12,302,195	1,928,973	94,852,344	1953

Source: U. S. Tariff Commission

PAN-PACIFIC FISHERIES INC.

"Quality Packers"

LUCKY STRIKE
BRAND
CHUNK STYLE
TUNA

TUNA

SARDINES

MACKEREL

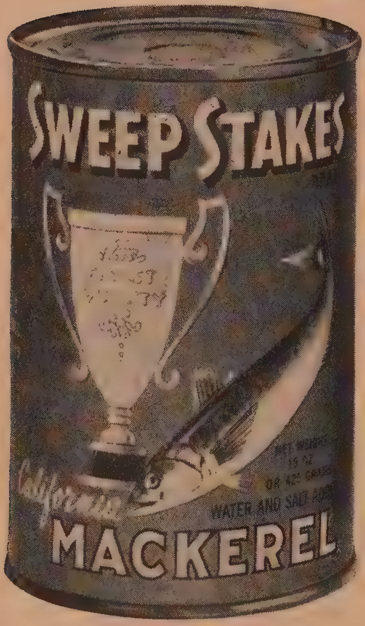
TOP WAVE
BRAND
SOLID PACK
Fancy WHITE MEAT
TUNA

TUNA IN PURE OLIVE OIL
TONNO
SALT ADDED
SORRENTO
BRAND

TOP

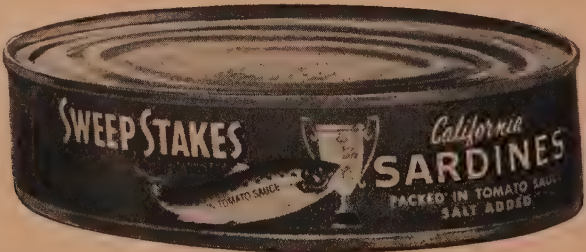
QUALITY

FISH


SWEEP STAKES
California
MACKEREL
WATER AND SALT ADDED

PACKED
UNDER
THE MOST
MODERN
SANITARY
CONDITIONS

SWEEP STAKES
FINEST QUALITY
California
SARDINES
WATER AND SALT ADDED


SWEEP STAKES
California
SARDINES
PACKED IN TOMATO SAUCE
SALT ADDED

350 SARDINE STREET, TERMINAL ISLAND, CALIFORNIA

CALIFORNIA PACK OF CANNED TUNA AND RELATED FISHES

(Cases)

YEAR	SAN PEDRO DISTRICT								SAN DIEGO DISTRICT								San Francisco & Monterey	GRAND TOTAL	YEAR
	Yellow-fin	Bluefin	Skipjack	Albacore	Flakes	Tonno	Tunalike (Bonito & Yellowtail)	TOTAL	Yellow-fin	Bluefin	Skipjack	Albacore	Flakes	Tonno	Tunalike (Bonito & Yellowtail)	TOTAL			
1926	122,968	67,525	189,581	43,660	11,786	90,689	47,710	573,919	96,363	2,758	85,389	14,555	4,162	40,864	15,416	259,507	......	833,426	1926
1927	185,423	40,363	155,755	105,598	7,816	197,275	26,660	718,890	200,635	9,645	226,420	20,481	435	10,221	20,147	487,984	......	1,206,874	1927
1928	323,813	85,994	64,061	99,093	7,577	106,038	14,759	701,335	287,770	46,348	130,430	658	9,156	11,783	9,798	495,943	......	1,197,278	1928
1929	199,292	67,091	128,436	130,212	7,707	88,454	49,943	671,135	458,687	22,637	218,696	2,426	10,906	31,351	13,027	757,730	......	1,428,865	1929
1930	262,278	302,660	82,282	143,748	11,508	57,110	73,049	932,635	739,616	6,944	185,848	1,783	18,053	17,875	17,635	987,754	......	1,920,389	1930
1931	182,115	46,462	166,091	144,796	12,850	35,514	37,289	625,117	431,229	.....	112,307	177	6,591	706	3,006	554,016	......	1,179,133	1931
1932	275,263	8,510	101,626	52,215	11,517	42,247	34,348	525,726	403,050	177	203,381	.....	4,774	.....	10,881	622,263	13,162	1,161,151	1932
1933	258,982	7,580	74,728	49,391	10,907	41,200	19,281	462,069	678,810	1	198,313	.....	2,183	.....	50,797	930,104	......	1,392,173	1933
1934	317,846	325,350	71,350	82,182	22,402	55,163	38,961	913,254	780,066	6,683	195,798	.....	8,100	.....	23,409	1,014,056	......	1,927,310	1934
1935	306,202	413,630	88,746	107,501	33,909	81,660	108,203	1,139,851	948,276	24,871	249,747	4,648	7,749	545	101,039	1,336,875	......	2,476,726	1935
1936	343,234	311,987	184,930	53,849	9,906	57,797	85,404	1,047,107	1,074,811	22,390	295,330	35	14,967	740	131,802	1,540,075	......	2,587,182	1936
1937	416,611	188,432	276,165	83,123	34,534	136,612	88,870	1,224,347	1,165,866	27,103	487,751	8,036	15,904	1,125	88,182	1,793,967	......	3,018,314	1937
1938	273,365	273,358	151,081	265,034	47,092	67,404	119,270	1,196,604	1,010,814	49,840	221,917	24,355	17,384	.....	77,818	1,402,128	......	2,598,732	1938
1939	578,727	191,456	212,042	281,666	41,104	70,022	151,241	1,526,258	1,348,565	27,020	257,528	46,372	31,136	7,318	32,463	1,750,402	28,637	3,305,297	1939
1940	536,391	267,343	306,447	122,484	85,459	124,094	106,225	1,548,443	1,469,428	45,867	529,776	19,304	141,861	60,138	49,624	2,315,998	3,953	3,868,394	1940
1941	308,886	136,333	109,563	73,024	40,545	33,530	161,835	863,716	1,016,759	32,369	323,466	10,145	130,004	308	144,331	1,657,382	9,071	2,530,169	1941
1942	214,391	250,685	128,980	128,670	39,880	23,479	34,542	820,627	545,517	28,413	590,594	104,578	111,096	.....	35,138	1,415,336	6,257	2,242,220	1942
1943	303,881	162,844	88,203	187,052	120,548	17,239	96,595	976,362	392,114	12,021	294,964	227,347	381,967	.....	12,298	1,320,711	11,342	2,308,415	1943
1944	341,687	357,531	105,863	125,632	234,639	15,365	20,817	1,201,534	485,796	16,473	257,994	307,806	530,368	.....	7,521	1,605,958	1,685	2,809,177	1944
1945	460,982	275,116	89,279	148,286	452,292	16,198	34,628	1,476,781	1,037,009	22,742	458,895	329,251	96,162	.....	32,524	1,976,583	3,078	3,456,442	1945
1946	663,814	304,248	202,729	141,629	558,026	....	88,589	1,959,035	1,549,557	28,753	445,560	233,622	268,767	.....	63,762	2,590,021	6,341	4,555,397	1946
1947	765,426	342,309	209,281	104,726	417,644	7,403	308,540	2,155,329	1,875,087	6,557	695,170	145,300	323,511	26,359	68,927	3,140,911	61,258	5,357,498	1947
1948	969,732	94,190	200,693	290,811	477,769	22,663	270,404	2,326,608	2,364,819	1,991	729,505	462,255	366,828	.....	39,420	3,964,818	55,526	6,346,952	1948
1949	614,847	38,142	157,373	289,063	1,330,358	78,821	49,195	2,557,799	2,059,468	2,889	904,793	535,013	420,491	4,038	24,884	3,951,576	81,021	6,590,396	1949
1950	742,815	14,786	266,809	586,683	2,456.705	202,368	14,595	4,284,761	913,458	3,300	495,462	482.894	1.898.568	54.988	7.741	3.856.411	143.273	8.141.172	1950
1951	611,673	...	...	337,456	2,670,876	104,235	77,229	3,801,469	974,469	...	...	269,774	2,122,698	58,042	10,260	3,435,243	293,873	7,530,585	1951
1952	3,089,057	...	...	814,198	1,216,024	86,948	196,453	5,402,680	1,354,515	...	...	509,385	459,840	45,328	34,234	2,403,302	296,860	8,102,842	1952
1953	4,065,824	*	*	1,376,613	*	*	109,835	5,552,272	2,337,049	*	*	681,104	*	*	56,581	3,074,734	87,297	8,714,303	1953

*Segregation of lightmeat tuna pack as to species, and amounts of chunks, flakes and tonno not available at presstime. Accordingly, all lightmeat tuna and special packs made from lightmeat have been shown under Yellowfin. Albacore totals also include chunks, flakes and tonno packed from this species. Quantities given are in standard cases of 48 halves.

VALUE OF PRINCIPAL CANNED FISH PRODUCTS

Year	PACIFIC SALMON			SARDINES		Pacific Tuna	Mackerel	Oysters	Shrimp	Clams	Crabs	Miscellaneous Fish Products	GRAND TOTAL
	Pacific Coast States	Alaska	Total	New England States	California								
1921-25*	$11,060,592	$29,457,922	$40,518,514	$5,781,523	$4,428,409	$5,751,385	....	$2,704,433	$3,928,434	$1,721,051	$71,087	$1,552,481	$66,457,317
1926-30*	12,772,490	38,329,082	51,101,572	6,281,996	9,494,787	8,990,774	$979,927	2,344,887	5,022,925	2,517,544	36,729	2,703,368	89,474,509
1930-35*	7,301,890	28,513,777	35,815,667	2,974,505	4,519,462	8,646,033	2,117,791	1,392,686	3,836,331	2,242,896	109,235	2,649,056	64,303,662
1936	5,309,438	44,751,633	50,061,071	5,740,454*	7,302,273	14,715,391	3,542,895	2,180,869	4,672,198	2,976,297	130,753	3,242,053	94,564,254
1937	8,386,165	44,547,769	52,933,934	4,998,373	8,592,117	18,995,779	2,673,608	2,932,681	7,130,747	3,013,446	269,699	3,634,551	105,174,935
1938	5,728,892	36,636,897	42,365,789	2,367,045	7,102,358	15,183,636	2,896,220	1,886,476	4,872,393	3,189,628	260,134	3,322,210	83,445,889
1939	7,339,727	34,441,122	41,780,849	7,075,096	9,553,663	20,079,567	2,588,695	2,378,945	5,397,662	3,798,319	259,756	3,714,998	96,627,550
1940	6,575,176	31,474,492	38,049,668	3,736,394	8,975,257	23,727,560	4,101,369	2,526,859	4,318,325	3,778,363	308,890	4,659,256	94,181,941
1941	11,199,317	56,217,601	67,416,918	12,590,958	18,091,873	19,397,887	3,503,718	2,997,114	4,882,544	3,711,029	547,617	5,659,466	138,684,157
1942	13,673,968	48,300,209	61,974,177	12,162,451	15,509,964	30,742,493	3,693,082	3,598,703	7,347,330	3,791,058	1,755,065	4,893,094	144,996,947
1943	5,110,847	57,824,267	62,935,114	11,104,570	14,352,359	31,430,189	5,271,203	2,821,556	5,360,647	2,802,420	1,194,483	4,334,350	141,188,792
1944	5,187,136	51,196,140	56,383,276	14,819,803	15,225,919	40,836,117	7,033,997	2,283,429	4,854,799	3,820,612	1,361,458	6,983,036	152,914,237
1945	7,942,102	44,644,303	52,586,405	12,077,201	15,346,472	47,407,451	4,046,691	2,029,953	1,918,633	7,391,098	883,767	9,669,714	152,800,571
1946	17,003,459	53,157,194	70,160,653	20,275,590	19,895,649	59,135,823	7,575,291	5,249,272	8,428,735	11,145,047	4,720,119	21,770,334	227,629,455
1947	31,969,134	88,669,542	120,638,676	28,310,674	16,538,375	90,609,175	15,018,633	4,259,485	8,192,004	8,642,235	2,705,391	16,398,742	310,678,920
1948	24,008,466	96,528,730	120,537,196	29,359,114	21,892,893	112,612,296	9,850,834	4,777,531	7,791,313	8,329,639	4,846,494	18,621,357	336,181,479
1949	22,167,812	81,263,168	103,430,980	21,051,675	21,334,825	97,710,325	6,848,930	6,525,207	11,203,325	8,779,018	3,490,885	15,128,735	295,503,905
1950	27,187,060	81,403,511	108,590,571	21,209,033	26,345,609	112,830,094	7,491,815	7,362,831	12,916,397	10,839,889	3,214,713	19,562,101	330,362,853
1951	29,388,514	79,237,355	108,625,869	14,635,352	19,362,744	96,540,290	6,259,222	6,154,235	12,362,599	11,773,909	3,693,490	21,802,585	301,210,295
1952	21,906,773	76,357,016	98,263,789	21,502,970	918,072	108,719,986	11,362,697	7,047,441	13,223,865	12,209,558	2,087,019	30,493,801	305,829,198

* Average.

ONLY THE FINEST 1/3 OF THE TUNA!

At our new million-dollar "Show Cannery of the West"—we pack only the finest one-third of our tuna under nationally-advertised BREAST-O'-CHICKEN Brand.

Using only the prime portions of selected top-grade tuna, we can assure buyers that BREAST-O'-CHICKEN offers them only the best-o'-tuna.

Such painstaking control is one reason BREAST-O'-CHICKEN has been recognized as America's quality tuna for more than a quarter of a century.

BREAST-O'-CHICKEN HI-PROTEIN TUNA

BREAST-O'-CHICKEN
CHUNK BRAND PACK
HI-PROTEIN
TUNA

BRAND
BREAST-O'-CHICKEN
Fancy Solid Pack
HI-PROTEIN
TUNA

WESTGATE-CALIFORNIA TUNA PACKING COMPANY
SAN DIEGO, CALIFORNIA

1953-CALIFORNIA TUNA PACK BY MONTHS-1953

(Cases)

	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total Cases "As they run"	Total Cases Basis 48-½'s.
Albacore - Whitemeat														
Solid Pack	19,569	23,163	79,783	91,235	68,722	60,824	266,250	353,666	172,351	47,489	8,368	3,039	1,194,459	
Standard Pack	1,011	...	1,640	2,964	1,331	1,088	8,808	753	47	1,602	...	...	19,244	
Chunk Pack	1,879	7,120	15,401	44,724	26,157	59,192	146,376	146,452	52,875	4,889	2,927	509	508,501	
Grated & Flakes	5,866	5,126	27,016	34,487	20,095	17,141	100,744	110,101	54,376	14,115	2,792	502	392,361	
Dark & Light	623	658	2,467	1,071	1,880	3,401	2,205	4,467	4,390	68	244	...	21,474	
Tonno	...	...	3,271	6,606	917	...	57	...	...	5	...	...	10,856	
Unspecified	502	15,503	7,934	7,062	1,331	3,538	12,124	5,441	1,376	1,893	62	...	56,766	
Total Whitemeat	29,450	51,570	137,512	188,149	120,433	145,184	536,564	620,880	285,415	70,061	14,393	4,050	2,203,661	2,145,014
Lightmeat														
Solid Pack	57,886	53,318	65,853	107,324	135,867	27,874	174,233	153,944	90,832	78,907	50,909	150,903	1,147,850	
Standard Pack	7,692	9,164	8,547	13,056	14,196	337,928	20,498	30,656	17,253	20,418	22,664	1,701	503,773	
Chunk Pack	194,552	108,335	144,323	323,519	325,241	107,664	540,169	474,531	240,039	235,624	216,859	251,505	3,162,360	
Grated & Flakes	67,578	39,577	62,979	98,924	89,126	4,005	187,145	162,426	73,492	71,199	79,157	81,054	1,016,662	
Light & Dark	2,305	296	1,048	2,998	4,028	8,492	4,855	4,725	572	2,324	4,779	1,080	37,502	
Tonno	14,029	7,702	11,102	14,952	11,138	...	18,199	20,175	7,904	20,176	10,680	16,767	152,824	
Unspecified	31,212	67,980	70,437	45,609	29,232	32,376	52,962	17,455	16,203	29,713	44,188	...	437,367	
Total Lightmeat	375,254	286,372	364,289	606,382	608,828	518,339	998,061	863,912	446,295	458,361	429,236	503,010	6,458,338	6,402,873
Bonito & Yellowtail														
Solid Pack	...	...	193	...	...	...	...	...	...	...	...	...	193	
Standard Pack	...	18	...	...	...	988	2,106	2,001	4,287	14,247	594	1,736	25,977	
Chunk Pack	...	...	...	...	3,289	444	348	...	721	2,609	1,909	3,472	12,792	
Grated & Flakes	661	752	5	900	2,634	3,705	2,795	3,067	5,718	65,426	26,972	12,152	124,787	
Unspecified	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total Tuna-like	661	770	198	900	5,923	5,137	5,249	5,068	10,726	82,282	29,475	17,360	162,749	166,416
Grand Total	343,651	255,229	423,628	742,760	704,621	632,746	1,474,788	1,466,964	724,857	579,098	428,854	524,420	8,825,748	8,714,303

ations at the Long Beach cannery and move to San Diego, this due to land subsidence.

A new tuna cannery was built at Puerto Rico, by a subsidiary of South Pacific Canning Company, Long Beach. Walter Forbes, formerly assistant to Manager Mel D. Marsh, was named manager.

Early 1953 Fishing Poor

For the first two months of the year Southern California canneries were some 5,000 tons of tuna ahead of the previous year, mainly due to stepped-up imports. Fishing was reported poor everywhere south of the international border to Peru.

Adverse fishing conditions were to continue for half the year at tropical banks, it being an "El Nino" year—Year of Disturbance—of catastrophic proportions, when abnormally warm currents upset natural balances and accounted for poor catches from Panama to Ecuador. Later, conditions returned to normal, but it was definitely an off-year for tuna fishing.

Purse Seiners Do Well

Purse seining got under way early and it was to prove a good year for netting operations, which yielded 27,000 tons. It was also to see a revival of Bluefin fishing, both in Southern California and Mexican waters, with 4,500 tons taken.

In late spring the Japanese government gave notice of favoring continuance of the quota system of exports of raw and canned tuna to the U.S., tentatively setting the figures at 30,000 tons, frozen; 1,500,000 canned. So far as the raw product was concerned, the figure was raised to 36,000 tons before the end of 1953,

SAN DIEGO CANNED TUNA

(Cases — All Sizes)

Year	Yellowfin	Bluefin	Skipjack	Albacore	Tonno	Tuna Flakes	Yellowtail	Bonito	TOTAL
1926	96,363	2,758	85,389	14,555	40,864	4,162	10,566	4,850	259,507
1927	200,635	9,645	226,420	20,481	10,221	435	15,703	4,444	487,984
1928	287,770	46,348	130,430	658	11,783	9,156	4,755	5,043	495,943
1929	458,687	22,637	218,696	2,426	31,351	10,906	9,451	3,576	757,730
1930	739,616	6,944	185,848	1,783	17,875	18,053	4,838	12,797	987,754
1931	431,229	....	112,307	177	706	6,591	749	2,257	554,016
1932	403,050	177	203,381	....	....	4,774	668	10,213	622,263
1933	678,810	1	198,313	....	....	2,183	32,129	18,668	930,104
1934	780,066	6,683	195,798	....	....	8,100	6,100	17,309	1,014,056
1935	948,276	24,871	249,747	4,648	545	7,749	64,054	36,985	1,336,875
1936	1,074,811	22,390	295,330	35	740	14,967	95,059	36,743	1,540,075
1937	1,165,866	27,103	487,751	8,036	1,125	15,904	44,128	44,054	1,793,967
1938	1,010,814	49,840	221,917	24,355	....	17,384	43,794	34,024	1,402,128
1939	1,348,565	27,020	257,528	46,372	7,318	31,136	12,875	19,588	1,750,402
1940	1,469,428	45,867	529,776	19,304	60,138	141,861	27,621	22,003	2,315,998
1941	1,016,759	32,369	323,466	10,145	308	130,004	103,066	41,265	1,657,382
1942	545,517	28,413	590,594	104,578	....	111,096	20,965	14,173	1,415,336
1943	392,114	12,021	294,964	227,347	....	381,967	5,488	6,810	1,320,711
1944	485,796	16,473	257,994	307,806	....	530,368	3,237	4,284	1,605,958
1945	1,037,009	22,742	458,895	329,251	....	96,162	14,074	18,450	1,976,583
1946	1,549,557	28,753	445,560	233,622	....	268,767	28,965	34,797	2,590,021
1947	1,875,087	6,557	695,170	145,300	26,359	323,511	45,800	23,127	3,140,911
1948	2,364,819	1,991	729,505	462,255	....	366,828	31,362	8,058	3,964,818
1949	2,059,468	2,889	904,793	535,013	4,038	420,491	22,695	2,189	3,951,576
1950	913,458	3,300	495,462	482,894	54,988	1,898,568	3,235	4,506	3,856,411
1951	———	2,424,215*	———	370,700	58,042	584,201	———	270**	3,437,428
1952	———	1,405,292*	———	534,574	44,576	485,423	———	3,115**	2,472,980

* Yellowfin, Bluefin and Skipjack not given separately.

** Yellowtail and Bonito not given separately.

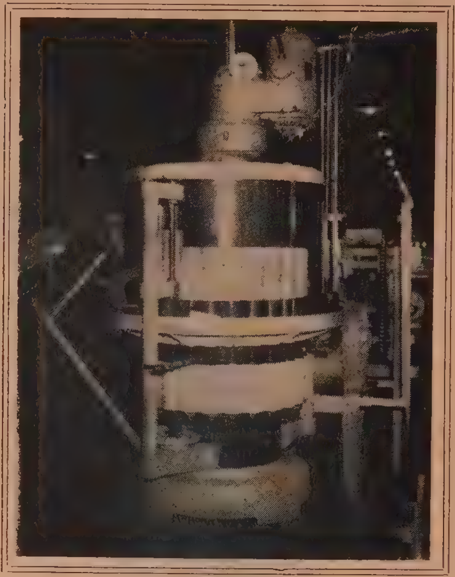
E. H. CARRUTHERS COMPANY

Engineers—Designers

To the Food Packing Industry

Tuna Packing Mechanized by Our Pak-Shaper

Pak-Shaper's Introduction in 1949 developed in tuna canning a greater measure of mechanization than had come about in 30 years of previous growth. . . . Subsequent experience has proved its value to the industry. A large percentage of major tuna operators presently employ the Pak-Shaper.



THE PAK-FORMER

The Pak-Former Now Available to the Tuna Industry

This machine has been developed exclusively for Chunk and Grated Style Pack. A variable speed drive permits filling speed adjustments of between 50 and 250 cans per minute. Available to the industry under similar terms as the Pak-Shaper.

E. H. CARRUTHERS CO. • P. O. BOX 1332 • WARRENTON, OREGON

SOUTH PACIFIC CANNING CO.

Packers of

"SOUTH PACIFIC"
"ROYAL PACIFIC"
"BLUE SHORE" } TUNA
"SEA GOLD" CLAMS
"OLD SOUTH" PACIFIC MACKEREL
"SEA GOLD" JACK MACKEREL
"SOUTH PACIFIC" SARDINES
"FLUFFY" PET FOOD
FISH MEAL and FISH OIL

PACKED BY
SOUTH PACIFIC
CANNING CO.
LONG BEACH,
CALIF.

543 PICO

LONG BEACH, CALIFORNIA

1953 - Southern California Tuna Receipts by Ports - 1953

Month	Yellowfin Tons	Skipjack Tons	Bluefin Tons	Albacore Tons	Bonito Tons	Yellowtail Tons	Total Tons
LOS ANGELES HARBOR							
January	1,809	2,792	10	493	...	7	5,111
February	1,409	2,395	...	562	...	...	4,366
March	2,917	2,094	9	1,585	...	3	6,608
April	6,882	1,552	2	2,139	...	15	10,590
May	7,487	2,246	...	1,419	...	15	11,167
June	6,497	2,615	...	2,344	...	34	11,490
July	7,768	6,852	655	5,301	79	53	20,708
August	4,282	5,400	1,907	6,175	25	105	17,894
September	2,381	2,039	918	2,809	34	94	8,275
October	2,016	2,467	315	606	853	555	6,812
November	1,642	2,485	12	130	85	145	4,499
December	2,123	3,082	40	69	110	90	5,514
Totals	47,213	36,019	3,868	23,632	1,186	1,116	113,034
SAN DIEGO							
January	1,147	1,004	...	...	...	8	2,159
February	473	1,128	...	75	...	14	1,690
March	1,609	1,065	...	631	...	5	3,310
April	2,804	492	...	1,014	...	8	4,318
May	2,992	797	...	298	...	118	4,205
June	2,494	1,375	...	161	...	87	4,117
July	2,241	3,216	246	3,626	1	59	9,389
August	2,172	3,876	440	4,005	...	11	10,504
September	1,412	3,664	68	1,587	5	145	6,881
October	1,313	3,133	6	288	81	262	5,083
November	1,658	3,329	...	...	133	263	5,383
December	1,513	4,415	5	12	122	174	6,241
Totals	21,828	27,494	765	11,697	342	1,154	63,280
Southern California Totals	69,041	63,513	4,633	35,329	1,528	2,270	176,314

and finally Japan announced probable intention of increasing this another 10,000 tons before end of the fiscal year, March 31, 1954.

Japan also announced later in the year its five-year plan to build a huge new fleet of steel and wood vessels, totaling 230 steel and 1,280 wood, and giving Japan an annual tuna tonnage potential of 552,775 tons.

Canned prices, f.o.b. western terminals, opened at $16.00 per case, White Meat fancy, advertised; $14.75, Light Meat, fancy. By late spring wholesale prices were making slight advances. By December 1, the scale was: Advertised, White Meat, fancy, $16.50; Chunks, $14,25. Light Meat, fancy, up to $15.75; Chunks, up to $13.75.

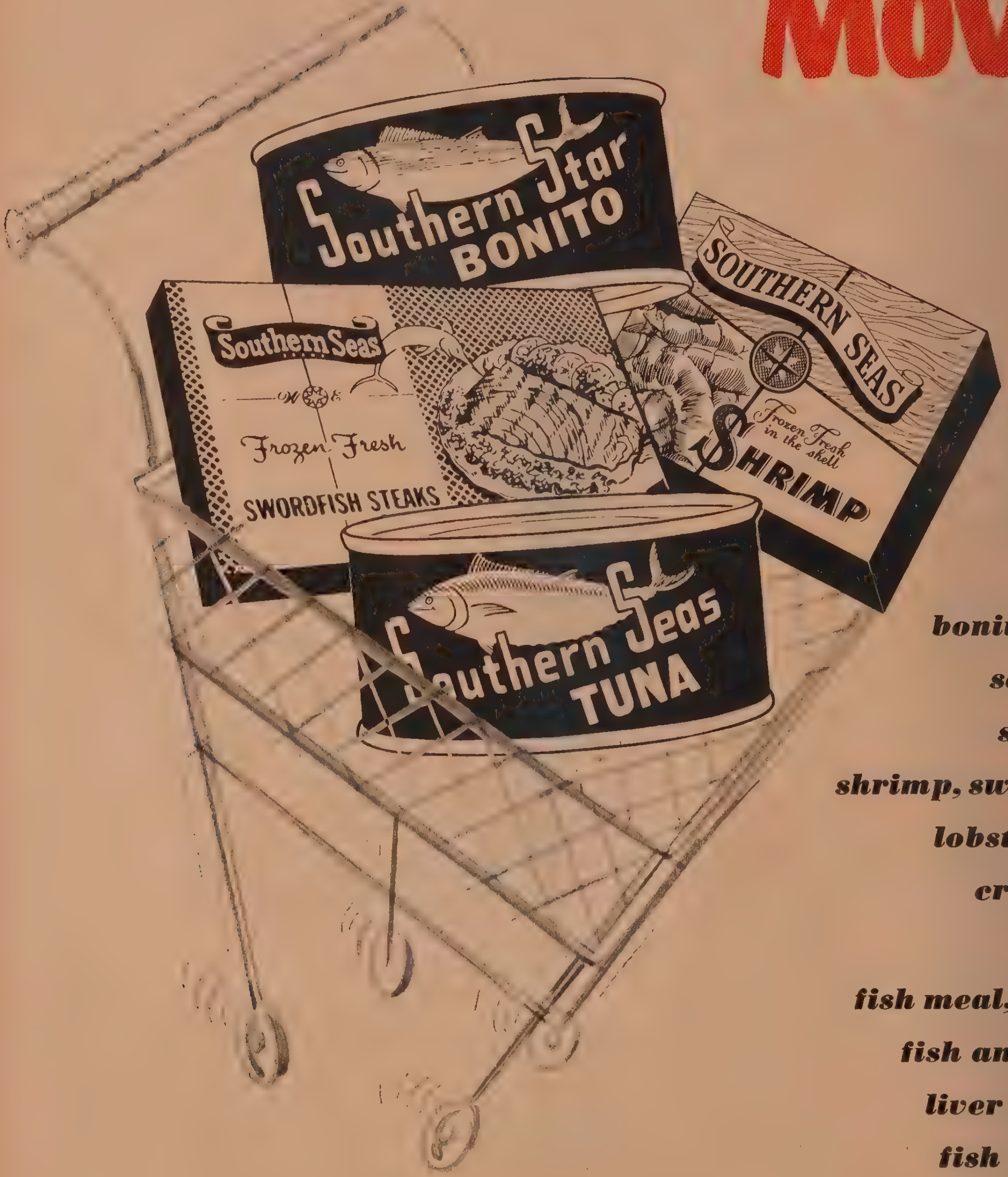
Inter-American Relations Improve

An acute shortage of canned tuna was developing by late spring as packers received only 26,000 tons for the first three months, only enough to pack 1,000,000 cases. Canners' position in the national markets was generally better because of virtual disappearance of the former hidden discounts.

On March 25, three Southern California officials accompanied William C. Herrington, U.S. State Depart-

THE ONLY WAY TO COMPETE WITH
Archer "S"
IS BY USING
Archer "S"
America's Finest
SOYBEAN SALAD OIL
PREMIUM FLAVOR AT NO EXTRA COST!
Refined deodorized and winterized by continuous vacuum process
A superb oil for canning tuna and sardines!
ARCHER-DANIELS-MIDLAND COMPANY
MINNEAPOLIS 2, MINNESOTA

Brands that Move!


Southern Star BONITO
Southern Seas
Frozen Fresh
SWORDFISH STEAKS
SOUTHERN SEAS
Frozen Fresh in the shell
SHRIMP
Southern Seas TUNA

bonito, tuna,
sardines,
scallops,
shrimp, swordfish,
lobster tails,
crab meat

fish meal, fish oil,
fish and shark
liver oils and
fish solubles

Suppliers of high quality seafood products from a worldwide organization

WILBUR-ELLIS CO.

Los Angeles • New York • Chicago • Seattle • Buffalo • Charlotte
Wilbur-Ellis Company of Canada, Ltd., Vancouver, B. C. • Cia. Wilbur-Ellis S. A., Buenos Aires, Argentina • Cia. Wilbur-Ellis Peruana S. A., Lima, Peru • Wilbur-Ellis Company (Pty.) Ltd., Capetown, South Africa • Wilbur-Ellis Company, Ltd., Tokyo, Japan

Main office: 320 California St., San Francisco 4, Calif.

ment, to Ecuador for meetings with that government on fisheries problems. These were, Harold F. Cary, ATA, John Real, FCA, and Donald Loker, CFCA. Meanwhile, Dr. W. M. Chapman spent several weeks at Panama, in an effort to straighten out bait-taking problems.

As a result of a number of meetings with Southern California fishery officials, much improved relations were effected with Peru, Chile, Ecuador, Columbia, Panama and Costa Rica.

The Pacific Fisheries Conference held a full-dress meeting at Los Angeles, March 20-21, presided over by Chairman Miller Freeman and attended by 80 representatives of all phases of the west coast fisheries.

The tuna clippers **Intrepid, Defiance, South Pacific** and **Virginia** were used for tagging-tuna operations during the year, assisting work of the California Fish & Game Commission's research vessel, **N. B. Scofield.** The tagged fish were donated by the vessels, and their cooperation with the scientists was through the American Tunaboat Association.

Imports in New Dress

Southern California canners got a look at something new in shipping foreign tuna into this country. It consisted of an experimental shipment of tuna processed and packed in open ½ round cans, frozen, and without oil or salt.

Mason Case was named general manager of two fishermen's cooperative: California Commercial Fishermen's Association, Terminal Island, and Five Star Fish Cold Storage, San Diego.

In June, Van Camp Sea Food Co. reorganized its laboratories at Terminal Island, naming Malcolm J. Goldie as general manager, to handle the company's "Sea Pep" products. Later it installed a reduction and stickwater plant at the San Diego Diego plant.

In May French Sardine Company, packers of "Star Kist" tuna, changed its name to Star-Kist Foods, Inc., but President J. J. Bogdanovich an-

Landings of Tuna in California

CAUGHT IN UNITED STATES WATERS

Year	Albacore	Bluefin	Bonito	Skipjack	Yellowfin	Total Pounds
1926	2,469,861	6,526,533	2,942,906	14,217,018	2,695,502	28,851,820
1927	4,455,372	4,898,386	1,121,476	5,802,598	595,247	16,873,079
1928	283,321	13,700,870	1,335,533	4,396,132	84,626	19,800,482
1929	269,056	7,476,370	593,886	8,032,077	199,444	16,570,833
1930	283,117	15,598,892	3,866,496	3,015,275	35,553	22,799,333
1931	37,322	2,356,775	3,014,135	11,965,616	154,024	17,527,872
1932	619,694	460,044	1,676,487	375,042	165,323	3,296,590
1933	487	324,216	1,967,244	10	6,867	2,298,824
1934	171,105	18,291,721	3,003,048	. . . . . .	19,514	21,485,388
1935	2,386,249	18,495,813	2,263,740	1,907,916	529,007	25,582,725
1936	956,771	13,808,578	2,216,679	8,456,751	767,231	26,206,010
1937	3,196,770	10,822,071	5,707,212	1,884,148	187,732	21,797,933
1938	12,492,675	16,512,262	4,684,570	2,816	10,566	33,702,889
1939	12,342,671	9,318,978	6,697,249	2,718,641	457,405	31,534,944
1940	5,587,790	18,849,968	3,553,069	2,985,111	237,527	31,213,465
1041	3,276,257	8,848,147	7,200,496	4,214,373	1,739	23,541,012
1942	7,997,293	10,331,506	861,841	217,838	1,315	19,409,793
1943	11,885,815	7,663,887	801,535	17,904	2,058	20,375,199
1944	8,091,207	16,072,045	326,175	43,676	45,373	24,578,476
1945	9,505,544	14,139,076	339,864	93,078	5,159	24,582,521
1946	9,101,600	15,529,229	582,948	1,747,060	32,653	26,993,490
1947	7,387,173	14,755,622	384,315	893,046	3,234	23,423,390
1948	10,499,390	1,693,760	214,992	319,194	593	12,727,929
1949	20,471,694	2,266,236	99,874	26,331	9,884	22,874,019
1950	38,170,909	9,339	33,456	12,421	1,461	38,227,586
1951	13,281,748	837,209	54,047	590	63	14,173,657
1952	23,092,253	907,215	7,504	534	. . .	24,007,506

CAUGHT IN WATERS SOUTH OF THE INTERNATIONAL BOUNDARY

Year	Albacore	Bluefin	Bonito	Skipjack	Yellowfin	Total Pounds
1926	60	. . .	178,698	6,734,330	9,869,484	16,782,572
1927	123,995	. . .	596,532	28,003,362	25,338,798	54,062,687
1928	. . .	. . .	770,370	11,551,972	32,168,580	44,490,922
1929	45	50,487	2,324,658	18,974,936	37,245,480	58,595,606
1930	. . .	6,322,390	1,297,764	17,470,312	56,618,628	81,709,094
1931	. . .	1,177,255	65,538	4,541,145	36,425,456	42,209,394
1932	. . .	611,162	1,185,799	21,261,535	36,758,087	59,816,583
1933	. . .	236,276	284,955	16,687,298	51,068,763	68,277,292
1934	. . .	66,107	199,646	14,830,194	60,893,646	75,989,593
1935	61,279	6,677,270	5,632,744	15,289,270	71,765,126	99,425,689
1936	. . .	5,116,305	4,999,237	18,549,354	77,585,413	106,250,309
1937	. . .	1,871,851	2,100,858	45,219,944	91,334,726	140,527,379
1938	29,919	1,215,769	3,155,423	22,650,815	78,277,578	105,329,504
1939	4,187	2,516,737	3,221,626	27,402,250	109,960,396	143,105,196
1940	880	1,120,300	1,737,895	53,665,044	113,660,682	170,184,801
1941	. . .	670,865	3,057,106	21,371,095	76,700,021	101,799,087
1942	2,623,900	2,513,058	788,848	38,497,344	41,166,126	85,589,276
1943	9,499,049	2,514,283	1,480,349	28,875,880	49,259,270	91,628,831
1944	9,774,659	4,259,966	492,696	29,920,701	62,190,656	106,674,678
1945	12,262,037	6,454,983	2,374,517	33,180,329	86,125,497	140,397,363
1946	8,962,447	6,502,519	5,042,700	39,130,247	126,393,035	186,033,948
1947	5,758,697	6,982,012	13,312,856	51,422,493	143,063,560	225,639,438
1948	25,926,456	4,835,047	8,920,134	58,433,122	191,635,058	289,749,817
1949	23,545,320	2,123,235	1,729,667	78,537,699	184,962,491	290,898,322
1950	23,575,512	2,729,624	662,158	124,712,144	182,222,961	333,902,399
1951	17,396,183	3,025,209	722,756	115,778,333	160,547,865	297,470,346
1952	26,697,061	3,669,470	2,135,013	84,733,692	178,376,101	295,611,337

GRAND TOTAL POUNDS

1926	45,634,392	1935	125,008,414	1944	131,253,154
1927	70,935,766	1936	132,456,319	1945	164,479,884
1928	64,291,404	1937	162,325,312	1946	213,027,438
1929	75,166,439	1938	139,032,393	1947	249,062,828
1930	104,508,427	1939	174,640,140	1948	302,477,746
1931	59,737,266	1940	201,398,266	1949	313,772,341
1932	63,113,173	1941	125,340,099	1950	372,129,985
1933	70,576,116	1942	104,999,069	1951	311,644,003
1934	97,474,981	1943	112,004,030	1952	319,618,843

NOTE:– All fish caught in U.S. waters were caught in California waters, except the following, which were caught off the Oregon-Washington coast: 48,030 lbs. in 1948; 30,396 lbs. in 1950; 9,159 lbs. in 1951.

SALMON AND TUNA CONSUMER PREFERENCE

City Size	No. of Homemakers	No. using Tuna	% in City Size Group	% of Total Tuna Users	No. using Salmon	% in City Size Group	% of Total Salmon Users
500,000 and over	516	272	52.7	25.4	254	49.2	21.0
50,000 - 499,999	406	216	53.2	20.2	175	43.1	14.5
20,000 - 49,999	620	302	48.7	28.2	308	49.7	25.5
Less than 20,000 and rural	931	280	30.0	26.2	470	50.5	39.0
TOTAL	2473	1070	43.3	100.0	1207	48.7	100.0
Farm	549	136	24.8	12.7	300	54.6	24.9
Non-Farm	1895	921	48.6	86.1	897	47.3	74.3
Blank, etc.	29	13	44.8	1.2	10	34.5	.8
TOTAL	2473	1070	43.3	100.0	1207	48.7	100.0

Source: U. S. Fish & Wildlife Service

Compare

ROYAL
HA
ROYAL
HAWAIIAN
TUNA

THIS FINE TUNA FOR

- QUALITY
- FLAVOR
- WORKMANSHIP

Hawaiian Tuna

Packed by Hawaiian Tuna Packers, Ltd.

Sales Office 215 Market Street, San Francisco • Main Office and Cannery, Honolulu, Hawaii, U.S.A.

U. S. Tuna Production, Imports and Consumption

(Quantity in thousands of Pounds)

YEAR	United States Pack From				Imports for Consumption		Apparent U. S. Consumption	Ratio (%) of Imports in All Forms to Apparent U. S. Consumption
	Domestic Catch		Imported Fish					
	Quantity	Percent of Consumption	Quantity	Percent of Consumption	Quantity	Percent of Consumption		
1931	21,759	82.9	3,536	13.5	937	3.6	26,232	17.1
1933	27,305	61.6	2,671	6.0	14,382	32.4	44,358	38.4
1935	49,365	81.8	2,827	4.7	8,185	13.5	60,377	18.2
1936	53,300	85.2	2,455	3.9	6,843	10.9	62,598	14.9
1937	59,455	78.0	5,760	7.5	11,053	14.5	76,268	22.0
1938	54,289	84.4	2,866	4.4	7,192	11.2	64,347	15.6
1939	71,861	84.4	3,217	3.7	10,126	11.9	85,114	15.6
1943	53,721	98.8	164	.3	511	.9	54,396	1.2
1944	69,331	94.5	854	1.2	3,163	4.3	73,348	5.5
1945	88,156	93.5	822	.9	5,252	5.6	94,230	6.4
1946	93,169	94.5	719	.7	4,739	4.8	98,627	5.5
1947	116,277	94.1	1,192	.9	6,148	5.0	123,617	5.9
1948	136,806	92.3	2,876	1.9	8,573	5.8	148,255	7.7
1949	136,768	88.6	4,933	3.2	12,596	8.2	154,297	11.4
1950	154,764	69.9	20,030	9.1	46,519	21.0	221,313	30.1
1951	129,388	70.8	27,938	15.3	25,408	13.9	182,734	29.2
1952	148,253	67.9	31,051	14.2	39,133	17.9	218,437	32.1

Source: U. S. Tariff Commission

nounced no change in the concern's corporate structure.

Fishing Often Disappointing

By mid-summer experienced fishermen were declaring, "Worst live-bait fishing in 30 years!" For the half year, raw receipts, including imports 72,194 tons, and 3,133,888 cases packed. This bettered the same period of 1952 of 66,861 tons and 2,904,405 cases, but only because of more than 100% increase in raw imports from 10,026,396 lbs. to 21,088,133 lbs.

In late May the San Diego clipper **Star-Crest** was detained for several weeks by the Panamanian government; fined $3,000 for allegedly taking bait within the three-mile limit.

Tuna Council of the Americas was formed in mid-summer to deal with overall problems arising between the industry, and Central and South American countries. Montgomery Phister was named chairman; John T. Real, vice chairman; Harold F. Carey, secretary.

Albacore fishing started in late June, but was largely to prove a disappointment to the hundreds of small boats gathering at Southern California ports. Opening price was $400 per ton; it went to $425 later and finally to $450. Total domestic catch was probably no more than 18,000 tons, against 22,000 tons in 1952.

During the year the industry com-

SAN PEDRO CANNED TUNA BY GRADES

YEAR & TYPE	Solid	Standard	Chunks	Grated & Flakes	Dark & Light	Tonno	Misc.	TOTAL
1951								
Lightmeat	497,942	113,731	666,590	1,701,833	48,690	103,817	11,260	3,143,863
Whitemeat	264,789	72,667	99,723	141,941	610	418	229	580,377
Yellowtail & Bonita	....	22,926	....	66,153	....	....	......	89,079
TOTAL	762,731	209,324	766,313	1,909,927	49,300	104,235	11,489	3,813,319
1952								
Lightmeat	820,745	89,832	2,198,446	973,275	54,860	83,083	94,883	4,315,094
Whitemeat	505,833	12,114	302,238	178,827	6,276	1,738	24,375	1,031,401
Yellowtail & Bonita	....	53,475	7,606	132,457	....	....	....	193,538
TOTAL	1,326,578	155,421	2,508,290	1,284,559	61,106	84,821	119,258	5,540,033

Tuna Prices Per Ton Paid Fishermen

YEAR	Albacore	Yellowfin	Bluefin	Skipjack
1917	$30	$50	$45	$40
1918	125	90	80	40
1919	200	90	80	40
1920	300	90	80	40
1921	145	80	80	60
1922	250	100	80	60
1923	300	80	75	60
1924	360	80	80	60
1925	200	80	80	60
1926	175	110	110	75-80
1927	Nominal	110	90	75
1928	$200 up	120	90	75
1929	300	120	110	70-80
1930	200	120	110	90
1931	200	120-100	90	90-80
1932	200	80	75	70
1933	200	100	90	80
1934	200	100	90	80
1935	125-160	100	90	80
1936	Nominal	105-110	95-90	85-90
1937	215	120	110	100
1938	215-130	120	110	100
1939	125	110	100	90
1940	140	110	110	100
1941	140	110-130	110-120	100-110
1942	300-400	190	180	170
1943	325	200	190	180
1944	325-390	200	190	180
1945	390	200	190	180
1946	390-440	200-280	190-270	180-260
1947	410-600	310-340	300	290-320
1948	550-740-425	340	330	320
1949	400-350	340-310	330-300	320-290
1950	400	310	300	290
1951	400-250-300	310	300	290
1952	350-400	320	310	280
1953	400	320	310	280

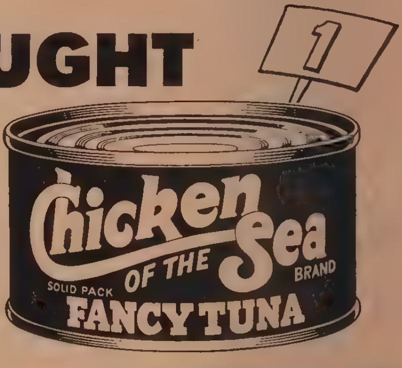
NOTE:– Prices quoted are per ton of round fish in good condition landed at cannery dock. All fish rejected by inspectors, either as landed or after precooking, are deducted from the gross weight.

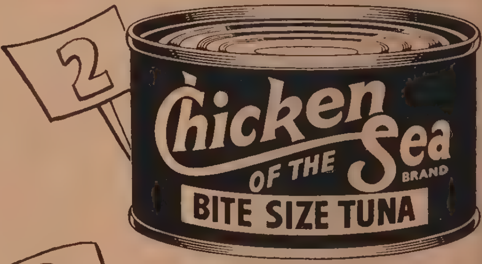
Figures given undertake to state the prevailing market level. Where a range in prices is shown it represents a definite change in market level in the course of the season, the movement being from the first to the second figures stated. Quotations for 1943 through 1945 are OPA ceiling prices for cannery fish, and represent the total amounts which may be paid the fishermen in cash or allowances, save for the cost of war-risk insurance. The lower figures in 1946 are ceiling prices and the higher represent levels attained after removal of OPA controls.

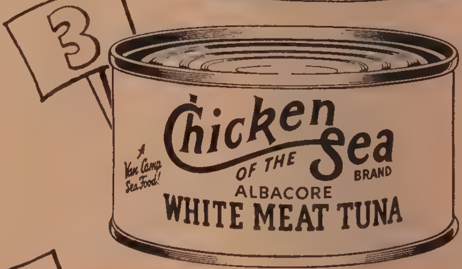
No other Tuna Packer

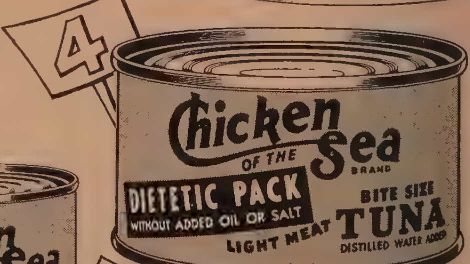
gives you a "family" of

EAGERLY-BOUGHT PROFITABLE TUNA PRODUCTS!

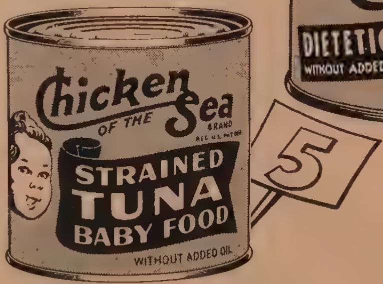

1
Chicken of the Sea Brand
SOLID PACK
FANCY TUNA


2
Chicken of the Sea Brand
BITE SIZE TUNA


3
A Van Camp Sea Food!
Chicken of the Sea Brand
ALBACORE
WHITE MEAT TUNA


4
Chicken of the Sea Brand
DIETETIC PACK
WITHOUT ADDED OIL OR SALT
LIGHT MEAT
BITE SIZE
TUNA
DISTILLED WATER ADDED

These same items also packed under our WHITE STAR Brand label.


5
Chicken of the Sea Brand
STRAINED TUNA BABY FOOD
WITHOUT ADDED OIL

VAN CAMP SEA FOOD CO., INC.
Terminal Island, California

SAN PEDRO CANNED TUNA

(Cases)

YEAR	Yellowfin	Bluefin	Skipjack	Albacore	Tonno	Tuna Flakes	Yellowtail	Bonito	TOTAL
1926	122,968	67,525	189,581	43,660	90,689	11,786	8,374	39,336	573,919
1927	185,423	40,363	155,755	105,598	197,275	7,816	8,827	17,833	718,890
1928	323,813	85,994	64,061	99,093	106,038	7,577	902	13,857	701,335
1929	199,292	67,091	128,436	130,212	88,454	7,707	5,845	44,098	671,135
1930	262,278	302,660	82,282	143,748	57,110	11,508	16,505	56,544	932,635
1931	182,115	46,462	166,091	144,796	35,514	12,850	1,292	35,997	625,117
1932	275,263	8,510	101,626	52,215	42,247	11,517	2,447	31,901	525,726
1933	258,982	7,580	74,728	49,391	41,200	10,907	1,389	17,892	462,069
1934	317,846	325,350	71,350	82,182	55,163	22,402	3,716	35,245	913,254
1935	306,202	413,630	88,746	107,501	81,660	33,909	17,123	91,080	1,139,851
1936	343,234	311,987	184,930	53,849	57,797	9,906	17,069	68,335	1,047,107
1937	416,611	188,432	276,165	83,123	136,612	34,534	3,352	85,518	1,224,347
1938	273,365	273,358	151,081	265,034	67,404	47,092	27,440	91,830	1,196,604
1939	578,727	191,456	212,042	281,666	70,022	41,104	11,739	139,502	1,526,258
1940	536,391	267,343	306,447	122,484	124,094	85,459	40,861	65,364	1,548,443
1941	308,866	136,333	109,563	73,024	33,530	40,545	26,241	135,594	863,716
1942	214,391	250,685	128,980	128,670	23,479	39,880	16,427	18,115	820,627
1943	303,881	162,844	88,203	187,052	17,239	120,548	67,780	28,815	976,362
1944	341,687	357,531	105,863	125,632	15,365	234,639	16,611	4,206	1,201,534
1945	460,982	275,116	89,279	148,286	16,198	452,292	3,262	31,366	1,476,781
1946	663,814	304,248	202,729	141,629	....	558,026	15,080	73,509	1,959,035
1947	765,426	342,309	209,281	104,726	7,403	417,644	87,934	220,606	2,155,329
1948	969,732	94,190	200,693	290,811	23,009	477,769	120,257	150,147	2,326,608
1949	614,847	38,142	157,373	289,063	78,821	1,330,358	31,072	18,123	2,557,799
1950	742,815	14,786	266,809	586,683	202,368	2,456,705	10,838	3,757	4,284,761
1951	——	——	1,289,523*	437,408	104,235	1,959,227	——	22,926**	3,813,319
1952	——	——	3,203,906*	844,560	84,821	1,345,665	——	61,081**	5,540,033

* Yellowfin, Bluefin and Skipjack not given separately. ** Yellowtail and Bonito not given separately.

mittee on Tuna Standards moved steadily toward finally arriving at standards acceptable to the U.S. Food and Drug administration. These were to cover pack style, color points, species labeling and fill of can. Albert Vignola Jr. is committee chairman and G. H. Clark is director of research.

Of tremendous interest and importance to the domestic Albacore fishery was the recovery of a tagged Longfin tuna, June 23 by a Japanese fishing vessel 500 miles S.E. of Tokyo. It was estimated the tuna covered 4,500 miles in 324 days, or 16 miles per day. The fish grew 2.6 inches during the period.

Van Camp Sea Food Company and the United Fish Cannery Workers' union, Local 64, got together in late July at San Diego on a new contract that boosted wages 5c per hour.

Panama Accepts Tuna Pact

Annual meeting of the Inter-American Tuna Commission was held at San Diego, August 14, with Jose Luis Cardona-Cooper, Costa Rica, presiding. Later Lee F. Payne, Los Angeles, succeeded him, the latter becoming secretary. Dr. Milton B. Schaefer continued as director of investigations in the eastern Pacific, studying Yellowfin, Big-Eye and Skipjack, as well as the live-bait resource. Soon after the meeting, Panama announced it was subscribing to the tuna research treaty, which hitherto had been between Costa Rica and the U.S.

A major project undertaken, following Panama's joining the commission, was the transplanting of 4,000 scoops of live bait from the Gulf of Panama to the Gulf of Nicoya, Costa Rica, to replenish that former great "bait corral" ruined by invasion of the "red tide" some years ago. The clipper **Saratoga** was used to transport the live anchovetas, gift of the Panama government.

As the year entered into the final quarter, Albacore fishing waned and operations transferred to more northern banks. An excellent Bluefin run occurred in local waters. Fishing though, from Mexico to Peru, did not improve materially.

1953-IMPORTS OF FRESH AND FROZEN TUNA-1953

Pounds

	Nov.'52	Dec '52	Jan.'53	Feb	March	April	May	June	July	August	Sept.	Oct.	TOTAL
Japan	1,444,018	1,248,470	1,497,044	1,598,122	6,454,415	9,954,994	4,219,431	9,335,506	19,615,849	13,144,067	2,390,203	5,885,290	76,787,409
Peru	551,977	549,552	...	2,023,960	1,273,858	1,592,072	1,344,436	680,988	1,101,525	1,478,907	...	1,704,920	12,302,195
Costa Rica	...	...	...	...	...	217,400	. .	...	...	231,483	...	...	448,883
Canal Zone	...	280,000	...	...	..	...	520,000	...	...	. .	340,000	...	1,140,000
Ecuador	...	127,866	650,000	...	...	81,570	700,000	...	...	...	88,184	418,000	2,065,620
Canada	...	2,846	3,693	...	1,040	..	410	400	17,929	59,083	70,306	23,557	179,264
Other Countries	17,771	...	...	71,390	...	328,481	120,280	...	770,000	600,000	...	21,051	1,928,973
Total	2,013,766	2,208,734	2,150,737	3,693,472	7,729,313	12,174,517	6,904,557	10,016,894	21,505,303	15,513,540	2,888,693	8,052,818	94,852,344

JAPANESE EXPORTS OF FROZEN TUNA

	Albacore		Skipjack		Yellowfin		Total	
	No. Tons	Aver. Cost Per Ton fob Japan	No. Tons	Aver. Cost Per Ton fob Japan	No. Tons	Aver. Cost Per Ton fob Japan	No. Tons	Aver. Cost Per Ton fob Japan
1948	1,142	$463	43	$260	....	....	1,185	$456
1949	1,306	317	80	210	....	....	1,386	310
1950	7,331	323	1,721	200	1,225	$ 244	10,227	293
1951	16,068	297	1,067	177	1,251	238	18,386	286
1952	22,711	305	702	210	3,492	223	26,905	292

Source: U.S. Fish & Wildlife Service

FISHING VESSELS ARE NOT BUILT TOO LARGE FOR THIS YARD TO HANDLE

MARY E. PETRICH
MARY E. PETRICH

SUCH GREAT TUNA CLIPPERS
AS THE

"MARY E. PETRICH"

Are Hauled Out With Speed and Safety.

WE HAVE DRYDOCKED PRACTICALLY EVERY MAJOR TUNA CLIPPER IN THE FLEET ON OUR

1000-TON

FLOATING

DRY-DOCK

Capable of Hauling Out the Largest Fishing Vessels, Wood or Steel.

SAN DIEGO MARINE CONSTRUCTION CO.

For over 30 years we have specialized in MARINE CONVERSIONS and MODERNIZATION

- Boats do grow old and need bringing up to date, either as to hull, machinery or refrigeration.

SEE US—Our work is thorough—our charges are reasonable

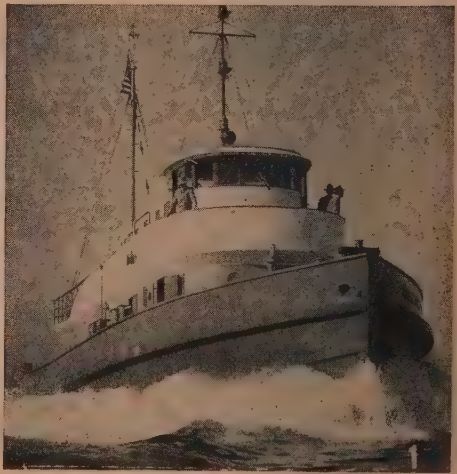
We Solicit—

SMALL BOAT

Service & Repair

EIGHT MARINE RAILWAYS

When in trouble at Sea
1600-hp.
"CHALLENGER"
Coast's Most Powerful Tug



Address: Foot of Sampson—San Diego, California
OAKLEY J. HALL, *President*

Telephone—FRanklin 9-8051
WAYNE JOHNSON, *Manager*

J. S. DE SILVA, Jr.
Terminal Island, Calif.
South Coast Fisheries, Ltd.
President, California Fish Canners Association

(Copyright Kennell-Ellis)

A. W. BRINDLE
Seattle, Wash.
President, Alaska Salmon Industry, Inc.
President, Wards Cove Packing Co.

ANGUS C. FINDLAY
Vancouver, B.C.
Sales Manager and Director,
Nelson Bros. Fisheries, Ltd.

JACK H. DORAN
San Francisco, Calif.
In charge, fish packing operations,
California Packing Corporation

THIS INSERT PROCESSED WITH
SCHMIDT "LUSTERCOAT"
HIGH GLOSS LACQUER

SPEED YOUR PACK FROM SEA TO SALE

with Schmidt FISH LABELS

Label changes are coming double-fast in the food field today. Yesterday's labels often fail to meet today's challenge. More color. More realism. More shelf impact. More appetite appeal. More sales umph! You see them popping up in grocery displays every day. But are they popping up on your labels? Products have to move fast today to keep volume distributors interested. And labels put speed in your sales . . . if they're high-speed labels. Take a good look at your own line. If your labels are a drag on your sales, we would relish the opportunity to help you put them right out front with the selling-est labels on the grocery shelf.

Schmidt LITHOGRAPH COMPANY

SAN FRANCISCO • LOS ANGELES • OAKLAND
FRESNO • SACRAMENTO • HONOLULU, T. H. • SEATTLE • PORTLAND • DENVER
HARLINGEN, TEXAS • SAN ANTONIO • ORLANDO, FLORIDA • CHICAGO • NEW YORK

S. L. 2

Hawaii, Oregon and Washington Lightmeat Tuna Pack

Year	Fancy and Standard			Chunks, Flakes, Grated			Grand Total	Year
	Halves 48	Quarters 96	Total Cases	Halves 48	Quarters 96	Total Cases		
1953	173,846	6,226	180,072	260,568	4,489	265,057	445,129	1953
1952	184,571	9,750	194,321	163,466	7,585	171,051	365,372	1952
1951	496,408	13,137	509,545	**	**	**	509,545	1951
1950	332,871	9,256	342,127	163,899	4,170	168,069	510,196	1950
1949	...	...	*129,848	...	...	*73,978	*202,826	1949
1948	...	...	93,335	...	...	56,738	150,073	1948
1947	...	...	60,793	...	...	33,189	93,982	1947

NOTE:– Quarters are counted on the basis of 8 dozen per case for statistical purposes, although normally packed 48 to the case.
*Figures for 1949 and years pervious are for lightmeat tuna production in Oregon and Washington only. Production for Hawaii is not included in the records for these previous years. ** Included with "Fancy and Standard". †Data for 1952 and 1953 as reported to "Pacific Fisherman" by producers. Total probably includes some Albacore, as there is some discrepancy from official figures of the U. S. F. W. S.

October and November were very disappointing to packers, who were anticipating good tonnage in returning clippers for the holiday and winter overhaul season. November, for example, produced less than 10,000 tons from all sources, domestic and imports, where it had been hoped the live-bait fleet would produce 15,000 tons itself.

The California Fish Canners Association held its annual meeting at Ojai in September and elected James S. DeSilva, secretary, South Coast Fisheries, as president; Donald P. Loker, Star-Kist Foods, Inc., as vice president; William C. Morehead, Pan-Pacific Fisheries, Inc., secretary-treasurer. Roy H. Beaton continued in his long-time post of executive vice president and general manager. The Miller Freeman perpetual golf trophy was won jointly by N. F. Trutanic and J. R. Biven, each to hold the cup six months.

In November, the Tuna Research Council, Ed. L. Morris, director, conducted a nationwide exploitation campaign on canned tuna, during National Tuna Week, November 4 to 15.

Japanese Mothership Delivers Tuna Direct to U.S.

An event of unusual importance was the arrival at Terminal Island, October 16 of the Japanese mothership **Bansha Maru No. 38**, unloading 1, 207,200 lbs. frozen Yellowfin; 591,000 lbs. Yellowfin fillets. This was believed the first visit of a Japanese mothership to a Southern California tuna cannery.

The year closed with California canneries producing about half a million cases more than 1952, from 183,000 tons, or 8,500,000 cases. The huge clipper fleets' gross catch declined from 1952's 120,000 tons to around 110,000 tons.

To December 1, Japan and Peru had exported to this country through California ports, 27,000 tons. For Japan: 20,500 tons, Albacore; 2,165 Yellowfin; 410 Skipjack. From Peru: 2,509 tons, Yellowfin; 1,607 Skipjack. Some additional 500 tons of frozen tuna was received from Mexico, Chile, Ecuador and Panama. An experimental 30 tons of Bluefin came in from Norway.

The American Tunaboat Association entered into negotiations with Southern California packers for increase in the price of raw Yellowfin and Skipjack. Raise asked was for Yellowfin, $360 from $320 per ton, round fish; Skipjack, $330 from $280. Also asked was that all fish arriving in the new year be paid at the higher rate, and that the live bait fleet during 1954 should be permitted to bring in 325% of capacity tonnage, instead of 1953's 300%.

Before the year's end, Star-Kist Foods, Inc., sent its research vessel, **Star-Kist**, formerly the seiner, **Fearless**, into the South Pacific on exploration, using long-lining as well as other types of tuna gear. Tony Marinkovich was skipper.

Lost during the year to December 1 were nine tuna clippers and five tuna seiners. The clippers: **City of San Diego, Manabi, Sonya, Mona Lisa, South Pacific, Star of the Sea, Dorothy Lee, Sea Lady, Explorer.** Seiners: **Cesare Augusto, Mary D, Lucky Star, Andrew D, Western Pilot.**

IMPORTS OF TUNA CANNED IN BRINE*

	(Quantities in Pounds)					
	1948	1949	1950	1952	1953 10 mos. Jan. – Oct.	
Peru	185	23,112	205,944	251, 230	304, 393	Peru
Japan	...	11,250	73,235	18, 562, 570	24, 475, 281	Japan
Chile	12,596	40,432	75,721	. . .	. . .	Chile
Portugal	...	...	11,651	. . .	. . .	Portugal
Angola	...	...	7,496	95,998	128, 553	Angola
Italy	...	2,149	3,367	. . .	. . . .	Italy
Port. Africa	...	...	3,443	. . .	. . .	Port. Africa
Other	103	2,414	60	112, 232	653, 322	Other
TOTALS	12,884	79,357	380,917	19, 022, 030	25, 561, 549	TOTALS

*Includes minor amounts of tuna not in oil canned in combination with other substances, such as soy sauce. Source: U. S. Tariff Commission.

SAN DIEGO CANNED TUNA BY GRADES

YEAR & TYPE	Solid	Standard	Chunks	Grated & Flakes	Dark & Light	Tonno	Misc.	TOTAL
1951								
Lightmeat	872, 560	101, 909	1, 444, 755	530, 229	2, 678	58, 042	4, 991	3, 015, 164
Whitemeat	180, 887	88, 887	100, 926	39, 119	.....	......	. ...	409, 819
Yellowtail & Bonito	....	270	....	12, 175	.....	......	.....	12, 445
TOTAL	1, 053, 447	191, 066	1, 545, 681	581, 523	2, 678	58, 042	4, 991	3, 437, 428
1952								
Lightmeat	475, 181	26, 455	902, 647	344, 532	......	36, 868	1, 009	1, 786, 692
Whitemeat	309, 319	....	225, 255	109, 774	......	7, 708	.....	652, 056
Yellowtail & Bonita	......	80	3, 035	31, 117	......	.....	.....	34, 232
TOTAL	784, 500	26, 535	1, 130, 937	485, 423	......	44, 576	1, 009	2, 472, 980

Despite virtual failure of the North Coast Albacore fishery, tuna canneries of the Pacific Northwest in 1953 produced 567,000 cases of Whitemeat tuna—the great majority from frozen tuna derived from foreign sources.

Lightmeat tuna packing in the Pacific Northwest continues to grow, and to give promise of still further advances.

ALBACORE packing in the Pacific Northwest exceeded a half-million cases again in 1953, the second year in succession, and did it despite the worst failure that the region's local Albacore fishery has known since its inception in the mid-Thirties.

The pack of 1953 fell slightly below that of the year before—by about the amount that the local catch was short—but it still proved the fourth largest the industry has produced.

How can you pack a half-a-million-plus cases of Albacore with a virtual failure of the catch? Imports.

The vast majority—practically all—of the Pacific Northwest whitemeat tuna pack of 1953 was produced from imported fish, brought frozen from Japan. This import business served to keep the canneries of Oregon and Washington—or some of them—active despite a catch failure which would have idled every plant and hundreds upon hundreds of cannery workers.

Production Closely Centered

The Pacific Northwest Albacore pack of 1953 was put up almost wholly in Oregon, the Puget Sound and Grays Harbor production counting for only about 10% of the total; while one company—the Columbia River Packers Association—packed far more than half the total. The pack of two companies—the C.R.P.A. and Van Camp Sea Food Co.—accounted for 83% of the regional production of Albacore.

1953-PACIFIC NORTHWEST ALBACORE PACK-1953

COMPANY	CANNERY LOCATION	FANCY & STANDARD		CHUNKS & FLAKES		TOTAL
		½-lb. Flats. 48's	Other Sizes	White Meat ½-lb.	Blended, White & Dark., ½-lb., 48's.	Standard Cases. 4-doz. ½-lb. Cans
Barbey Packing Corporation	Astoria	4,203	...	1,359	1,000	6,562
Columbia River Packers Assn.	Astoria	224,249	35,900	29,090	75,974	365,213
Farwest Fishermen, Inc.	Anacortes	10,706	...	1,943	5,494	18,143
Lazio Fish Co., Tom	Eureka	....	812	...	173	985
Portland Fish Co.	Portland	2,168	...	563	...	2,731
Point Adams Packing Co.	Hammond, Ore.	17,011	2,234	4,814	5,076	29,135
Union Fishermen's Co-Op	Astoria	2,265	...	102	534	2,901
Van Camp Seafood Co.	Astoria	79,807	6,812	47,312	1,139	135,070
West Coast Fish Co.	Aberdeen	15,960	...	1,412	5,269	22,641
Whiz Fish Products Co.	Hoquiam	10,692*	...	...	...	10,692
TOTAL		367,061	45,758	86,595	94,659	594,073

*Includes a small amount of lightmeat tuna.

NORTH COAST ALBACORE PACKS BY PORTS

(Cases)

Oregon Coast	Columbia River	Oregon Total	Year	Pacific Northwest Regional Total	Year	Washington Total	Willapa-Columbia River	Grays Harbor	Puget Sound
...	541,612	542,597	1953	594,073	1953	51,476	...	33,333	18,143
...	487,563	487,563	1952	588,926	1952	101,363	12,503	88,860	...
...	334,903	334,903	1951	398,236	1951	54,333	...	54,333	...
13,060	586,287	599,347	1950	701,014	1950	101,667	3,500	98,167	...
23,287	319,337	342,624	1949	432,919	1949	90,295	10,845	79,450	...
44,822	286,847	331,669	1948	417,354	1948	85,685	8,225	76,627	833
(a)47,123	281,062	(a)328,185	1947	(a)385,570	1947	57,385	8,434	48,508	443
23,243	121,386	144,629	1946	192,237	1946	47,608	...	47,608	...
55,747	348,958	404,705	1945	466,859	1945	62,154	...	62,154	...
40,000	(b)750,356	790,356	1944	846,596	1944	56,240	...	56,240	...
8,000	282,536	290,536	1943	301,414	1943	10,878	...	10,878	...
...	307,810	307,810	1942	314,353	1942	6,543	...	6,543	...
...	194,833	194,833	1941	197,629	1941	2,796	...	1,176	1,620
...	197,535	197,535	1940	207,723	1940	10,188	...	4,908	5,280
2,118	151,584	153,702	1939	(c)173,359	1939	15,857	...	3,100	12,757

(a) Includes 4,216 cases canned at Eureka, Calif. (b) Division of 1944 pack between Columbia River and Oregon Coast is only approximate. (c) Includes 3,800 cases canned in British Columbia.

Note:-Data for the several calendar years cover packs made from fish caught during those years, even though in some cases canning of frozen stocks may not have been completed until in the next calendar year.

KOHLENBERGER . . .

DEPENDABLE REFRIGERATION

Since 1922 KOHLENBERGER DEPENDABLE REFRIGERATION has safeguarded thousands of tons of valuable tuna in Southern California Clippers and Seiners.

TODAY—AS YESTERDAY—AND A THIRD OF A CENTURY AGO—COMMERCIAL FISHERMEN FROM SAN DIEGO TO ALASKA HAVE PUT THEIR CONFIDENCE IN—

KOHLENBERGER
DEPENDABLE
REFRIGERATION

●

ANTOINETTE B

"Antoinette B" is typical of the modern Tuna Clipper equipped with **KOHLENBERGER REFRIGERATION.** Built by National Steel and Shipbuilding Corp., San Diego, she brings in capacity loads trip after trip. **Kohlenberger Refrigeration Equipment Was Supplied by Atwell Supply Co., San Diego Distributors.**

Whether you are planning to build a new fishing boat—modernize your present refrigeration system — build an ice-making plant—or fish cold storage—it will pay you to investigate the new 1954 Kohlenberger Line of Fishing Boat Refrigeration. Be sure to specify the New Kohlenberger KMV series Compressor — Rugged ● Dependable ● Small Size ● Multi-cylinder ● Correct Capacities — You'll be glad you did.

Our trained refrigeration engineering staff is at your service.

Write—Call—or Contact—

KOHLENBERGER
ENGINEERING CORPORATION
DEPENDABLE REFRIGERATION SINCE 1922
FULLERTON • CALIFORNIA

General Offices and Factory:
Fullerton, California
Telephones: Los Angeles
Mutual 6497 - Lambert 5-3521

San Diego Sales ● Parts ● Service
Atwell Supply Co.
1150 Harbor Dr. FRanklin 9-2129

NORTH COAST ALBACORE BY GRADES

(Cases)

OREGON				Year	PACIFIC Northwest Combined Totals	Year	WASHINGTON			
Fancy & Standard	Flakes		Total Standard				Total Standard	Flakes		Fancy & Standard
	White	Blended						White	Blended	
375,461	83,240	83,896	542,597	1953	594,073	1953	51,476	3,355	10,763	37,358
323,870	81,297	82,396	487,563	1952	588,926	1952	101,363	25,041	8,950	67,372
254,173	23,984	56,746	334,903	1951	389,236	1951	54,333	12,347	3,186	38,800
430,712	62,849	101,319	594,880	1950	701,014	1950	106,134	18,791	15,277	72,066
265,266	24,336	52,697	342,299	1949	432,919	1949	90,620	23,244	5,731	61,645
231,138	48,583	50,404	330,125	1948	417,354	1948	87,229	15,450	9,372	62,409
231,075	50,163	45,464	(a)326,702	1947	(a)385,570	1947	58,868	5,876	11,179	41,813
101,478	23,477	19,674	144,629	1946	192,237	1946	47,608	7,251	5,708	34,649
274,720	69,454	55,674	(d)399,848	1945	466,859	1945	67,011	7,391	9,440	50,180
564,574	106,777	119,005	790,356	1944	(b)846,596	1944	56,240	...	16,240	40,000
250,982	39,554	...	290,536	1943	301,414	1943	10,878	...	1,775	9,103
...	...	...	307,810	1942	314,353	1942	6,543	...	...	...
...	...	...	194,751	1941	197,629	1941	2,878	...	...	...
...	...	...	197,735	1940	207,723	1940	10,188	...	...	...
...	...	...	153,702	1939	(c)173,359	1939	15,857	...	...	...

(a) Includes 3,231 cases fancy and 985 cases flakes canned at Eureka, Calif.
(b) Division of 1944 pack as to grades is approximate only.
(d) Includes a small quantity canned at Ilwaco, Wash.
(c) Includes 3,800 cases canned in British Columbia.

Note:-Grade segregation not available for years prior to 1943. Figures for the several calendar years cover quantities packed from fish caught during those years, even though in some cases canning of frozen stocks may not have been completed until the next calendar year.

A remarkable proportion—almost 400,000 cases out of 567,000 was solid pack tuna. The 84,000-case chunk-and-flake pack out of this total is most unusual in today's tuna packing practice.

It is significant also that the Northwest packers were able to get 89,000 cases—more than the chunk-and-flake pack—of blended white and dark flakes—a somewhat controversial product for which they find a ready market.

North Coast Tuna Fishing at New Low

Albacore fishermen of the Pacific Northwest found almost no fishing in their home waters in 1953, the fifth consecutive year of declining catch — a year which carried the catch down to barely 10% of what it had been six years before.

At that, a very large proportion of the landings in Oregon and Washington were those made by vessels homeward bound after a season spent in the southern fisheries—the production of the northward trip. Either that, or the deliveries of vessels taking Albacore too small for market in California with its 9-lb. minimum weight.

The discouraging results of recent seasons curtailed the local fishing effort to a substantial degree, but this was not the factor which produced so small a catch. The fish simply were not there.

As has been the case in several recent years, the larger vessels of the Northwest Albacore fleet—particularly the halibuters—went to Southern California waters immediately after the close of halibut fishing. Lacking news of good fishing nearer home, they did not return north until the fishing off and south from San Diego began to dwindle and decline.

Lightmeat Tuna Trade Shows Growth Tendencies

Although the Pacific Northwest Albacore pack was the region's principal contribution to American tuna production, the lightmeat tuna pack of Oregon — with Washington contributing a little—was a very substantial part of the national output of this grade. Here also, of course, the raw material came entirely from foreign sources — essentially Oriental, but some of it from South and Central American fisheries.

Those familiar with the situation and the arrangements being made early in 1954 believe that the lightmeat phase of Pacific Northwest tuna packing operations will increase further in the current year as result of arrangements concluded with the Japanese longline fleet working newly opened waters along the Equator, and delivering their catch through freezerships.

Perhaps of more interest than actual importance was the packing in the Pacific Northwest of some Bluefin tuna imported frozen **from Norway.** The volume was not great, and companies handling it did not disclose the degree of their satisfaction with the material and the results they secured from it.

1953—WASHINGTON ALBACORE LANDINGS—1953

PORT	JULY		AUGUST		SEPTEMBER		OCTOBER		SEASON		PORT
	Trips	Pounds	Trips	Pounds	Trips	Pounds	Trips	Pounds	TRIPS	POUNDS	
Grays Harbor	1	110	2	510	2	2,515	7	14,211	12	17,347	Grays Harbor
Willapa Harbor	...	...	...	...	...	.....	...	......	...	......	Willapa Harbor
Puget Sound	...	...	...	...	2	1,062	9	18,426	11	19,488	Puget Sound
TOTAL	1	110	2	510	4	3,577	16	32,637	23	36,835	TOTAL

NOTE. - Figures are full and complete. No British Columbia or California imports are included

1953-Imports of Canned Bonito 1953

Countries	Pounds												
	Nov. '52	Dec. '52	Jan. 1953	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Total
Peru	345,274	811,443	1,064,259	1,122,616	1,840,030	1,432,831	809,733	580,053	865,990	661,234	436,602	197,667	10,167,732
Chile	...	36,443	46,500	..	. .	.	..	...	17,550	...	...	...	100,493
Other Countries	995	220	4,525	...	..	1,703	3,231	400	...	13,286	12,346	1,265	37,971
Total	346,269	848,106	1,115,284	1,122,616	1,840,030	1,434,534	812,964	580,453	883,540	674,520	448,948	198,932	10,306,196

Ray Bentley

CANNING ENGINEER AND FISHERIES TECHNOLOGIST
OVER 50 YEARS CONTINUOUS FISH CANNING EXPERIENCE

COMPLETE CANNING LINES FOR TUNA OR SARDINES
LAID OUT TO FIT YOUR REQUIREMENTS

CAN DRAINERS, EXHAUST BOXES, PACKING TABLES, CAN WASHERS, SAUCING DEVICES, CUTTING and EVISCERATING MACHINES, FISH-GRADERS and SCALERS, NEW METHOD FISH-CLEANING MACHINE, RETORTS, TUNA-COOKERS RACKS and BASKETS, STERILIZERS, PRE-COOKERS and COOLERS—FOR FRUIT and VEGETABLE PROCESSING

UNIVERSAL CANNING MACHINERY COMPANY

- Pacific Coast Export Agents
FOOD MACHINERY & CHEMICAL CORP.
San Jose, California

Atlantic Coast Export Agents
CHISHOLM-RYDER COMPANY, INC.
Niagara Falls, New York

Mail Address
762 BAYVIEW AVENUE
PACIFIC GROVE, CALIFORNIA
PHONE — 2-3134

Factory
119 DEWEY AVENUE
PACIFIC GROVE, CALIFORNIA
PHONE — 5-5476

NORTH PACIFIC ALBACORE TUNA LANDINGS

(Pounds)			YEAR	(Pounds)					(Pounds)
OREGON				WASHINGTON					Combined Oregon and Washington Totals
Columbia River	South of Columbia	Oregon TOTAL		Puget Sound	Grays Harbor	Willapa Harbor	Columbia River	Washington State, TOTAL	
			1943						
1,333,241	419,371	1,752,612	July	. . . .	300,247	. . . .	185,711	485,958	2,238,570
2,922,206	1,160,977	4,083,183	August	22,920	1,393,057	. . . .	338,333	1,754,310	5,837,493
2,646,887	689,252	3,336,139	September	169,788	1,566,949	. . . .	132,534	1,869,271	5,205,410
1,067,015	147,007	1,214,022	October	284,112	250,411	. . . .	4,616	539,139	1,753,161
7,969,349	2,416,607	10,385,956	1943 TOTALS	476,820	3,510,664	. . . .	661,194	4,648,678	15,034,634
			1944						
975,332	612,585	1,587,917	July	34,686	741,058	3,347	247,912	1,027,003	2,614,920
6,288,455	2,690,529	8,978,984	August	141,553	4,683,789	68,714	660,234	5,554,290	14,533,274
7,708,799	1,069,649	8,778,448	September	279,354	3,536,677	161,052	125,037	4,102,120	12,880,568
3,014,988	58,367	3,073,355	October	206,906	786,177	. . . .	14,355	1,007,438	4,080,793
17,987,574	4,431,130	22,418,704	1944 TOTALS	662,499	9,747,701	233,113	1,047,538	11,690,851	34,109,555
			1945						
. . . .	. . . .	. . . .	June	. . . .	42	. . . .	6,730	6,772	6,772
1,147,222	306,909	1,454,131	July	119,847	1,850,105	21,572	196,118	2,187,642	3,641,773
6,290,075	1,612,425	7,902,500	August	92,797	3,009,811	75,900	335,131	3,513,639	11,416,139
2,327,060	262,702	2,589,762	September	28,130	140,779	28,609	9,608	207,126	2,796,888
231,978	. . . .	231,978	October	104,491	45,882	517	. . . .	150,890	382,868
. . . .	. . . .	. . . .	November	842	44	. . . .	. . . .	886	886
9,996,335	2,182,036	12,178,371	1945 TOTALS	346,107	5,046,663	126,598	547,587	6,066,955	18,245,326
			1946						
323,331	70,559	393,899	July	172	289,029	23,505	46,995	359,701	753,591
1,741,573	629,466	2,371,039	August	24,675	778,484	33,936	148,526	985,621	3,356,660
1,155,319	30,556	1,185,875	September	165,491	624,818	. . . .	1,743	792,052	1,977,927
3,220,223	730,581	3,950,804	1946 TOTALS	190,338	1,692,331	57,441	197,264	2,137,374	6,088,178
			1947						
673,647	362,169	1,035,816	July	45,505	1,037,929	43,786	140,469	1,267,689	2,303,505
2,027,945	584,636	2,612,581	August	177,831	2,153,029	92,529	260,545	2,683,934	5,296,515
2,092,618	2,304,774	4,397,392	September	8,563	65,899	10,785	. . . .	85,247	4,482,639
817,813	310,021	1,127,834	October	25,480	32,898	. . . .	. . . .	58,378	1,186,212
5,612,023	3,561,600	9,173,623	1947 TOTALS	257,379	3,289,755	147,100	401,014	4,095,248	13,268,871
			1948						
1,990,811	652,747	2,643,558	July	62,312	1,578,549	58,561	162,821	1,862,243	4,505,801
2,723,713	962,938	3,686,651	August	390,672	3,318,286	123,892	348,561	4,181,411	7,868,062
932,365	422,249	1,354,614	September	169,900	116,808	61,822	. . . .	348,530	1,703,144
33,053	124,329	157,382	October	14,938	36,521	6,890	. . . .	58,349	215,731
5,679,942	2,162,263	7,842,205	1948 TOTALS	637,822	5,050,164	251,165	511,382	6,450,533	14,292,738
			1949						
526,928	104,676	631,604	July	31,968	654,685	32,382	51,073	770,108	1,401,712
1,625,236	519,676	2,144,912	August	825,487	2,174,227	79,840	93,094	3,172,648	5,317,560
1,301,185	923,260	2,224,445	September	6,860	287,086	. . . .	2,507	296,453	2,520,998
1,073,558	224,787	1,298,345	October	75,601	115,196	. . . .	. . . .	190,797	1,489,042
26,273	1,361	27,634	November	3,895	. . . .	. . . .	. . . .	3,895	31,529
4,553,180	1,773,760	6,326,940	1949 TOTALS	943,811	3,231,194	112,222	146,674	4,433,901	10,760,841
			1950						
1,430,466	233,420	1,663,886	July	152,213	1,506,955	130,851	365,227	2,155,246	3,819,132
1,114,353	787,569	1,901,922	August	317,068	1,563,558	78,253	108,101	2,066,980	3,967,902
254,458	241,514	495,972	September	34,672	7,293	. . . .	. . . .	41,965	537,937
1,046,105	171,781	1,217,886	October	. . . .	22,084	. . . .	. . . .	22,084	1,239,970
210,851	. . . .	210,851	November	. . . .	. . . .	. . . .	. . . .	. . . .	210,851
4,056,233	1,434,284	5,490,517	1950 TOTALS	503,953	3,099,890	209,104	473,328	4,286,275	9,776,792
			1951						
25,527	15,656	41,183	July	. . . .	52,442	1,520	. . .	53,962	95,145
186,450	30,336	216,786	August	20,528	88,817	18,121	1,098	128,564	345,350
667,145	635,503	1,302,648	September	21,106	171,236	34,712	. . . .	227,054	1,529,702
1,012,583	241,741	1,254,324	October	92,355	19,554	. . . .	. . . .	111,909	1,366,233
90,878	10,726	101,604	November	. . . .	. . . .	. . . .	. . . .	. . . .	101,604
1,982,583	933,962	2,916,545	1951 TOTALS	133,989	333,049	54,353	1,098	521,489	3,438,034
			1952						
10,050	3,944	13,994	July	...	515	...	...	515	14,509
8,039	115,060	123,099	August	...	1,997	3,642	...	5,639	128,738
284,663	1,014,502	1,299,165	September	8,269	31,840	14,138	...	54,247	1,353,412
792,615	47,424	840,039	October	41,733	48,109	...	...	89,842	929,881
252,102	4,364	256,466	November	22,308	...	...	...	22,308	278,774
52,591	...	52,591	December	...	4,512	...	...	4,512	57,103
1,400,060	1,185,294	2,585,354	1952 TOTALS	72,310	86,973	17,780	...	177,063	2,762,417
			1953						
21,378	...	21,378	August	..	620	...	...	620	21,998
60,238	505,950	566,188	September	1,062	2,515	...	...	3,577	569,765
145,034	39,912	184,946	October	18,426	14,211	...	...	32,637	217,583
226,650	545,862	772,512	1953 TOTALS	19,488	17,346	...	...	36,834	809,346

Sun-Pacific, Inc.

Successor To

Sun Harbor Packing Company

Incorporated 1924

520 Ash Street
San Diego 12, California
Belmont 9-2289

FOR PROMPT ATTENTION

Sales · Parts · Repairs · Service

CATERPILLAR
MARINE DIESEL ENGINES

BENDIX depth RECORDER

Petter

WOOD FREEMAN METAL MARINE PILOT

FEDERAL PROPELLERS

Universal 100% MARINE MOTORS

RCA RADIOMARINE *Radiotelephone* AND Radio Direction Finder

LOS ANGELES
SAN DIEGO

SHEPHERD MARINE

SAN PEDRO

SARDINES

From 5,430,000 cases in 1950, the California sardine industry's production fell in 1953 to 64,734 cases.

These figures are a fair measure of the staggering failure of a fishery which only a few years ago yielded larger tonnage than any other American fishing enterprise.

The swiftness and extent of the debacle is demonstration enough that the failure cannot be ascribed to over-fishing alone—although it may have contributed—and must be attributed to a complex of varying adverse circumstances.

SARDINE CANNING in California in 1953 shrank almost to the vanishing point when that year's production of 64,734 cases is viewed against the packs of former years when for decade after decade the annual packs averaged in the millions of cases and occasionally exceeded 5 million.

In those days the size of the sardine pack was limited only by the apparent market; and most of the sardines were used for the manufacture of oil and meal for technical use and animal feeding. The State of California had—and still has—a law which **required** the canning of 13.5 cases of sardines for every ton of fish bought; but with the provision that permits could be granted for "straight" reduction if the market for the canned product could not absorb the anticipated catch.

With the failure of the fishery, California has become an importer of oval sardines in tomato sauce, and virtually all of this familiar product available on the Pacific Coast currently is the imported product from Japan or South Africa.

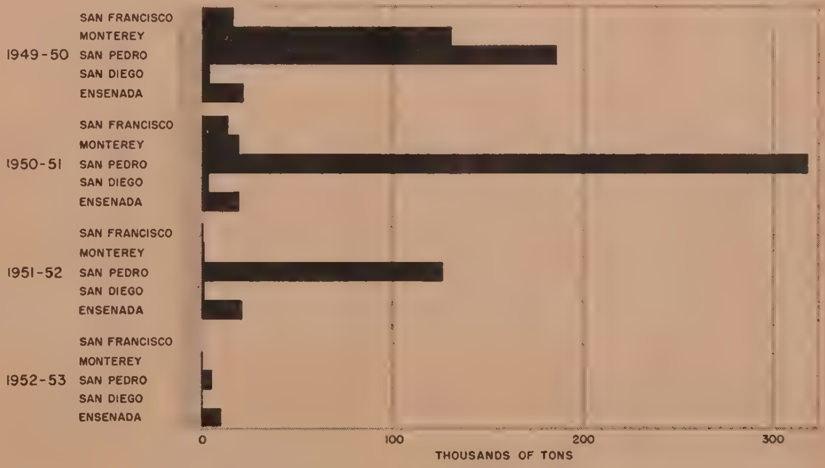
In 1953 Monterey canned only 1,160 cases of sardines—where formerly the port handled as much as 8,000 tons of fish per day.

Anchovies and mackerel are being canned in sardine plants to meet the demands of the former sardine consumers while the industry waits for scientific research to determine the reasons for the failure and to detect evidence of returning abundance.

California in 1953 had the most disastrous sardine year in its history. The pack was far below that of 1952.

Primary reason for the slump in the fishery which in its best years had produced more than 5,000,000 cases annually was given by the Marine Research Committee and the California Fish and Game Commission: **There hasn't been a good spawning survival of sardines since 1948.**

PROGRESSIVE SHRINKAGE IN SARDINES



1953-CALIFORNIA SARDINE PRODUCTION-1953

Month	Tons Received	Cases 1-lb. Oval 4 doz.	Cases 1-lb. Tall 4 doz.	Cases 8 oz. Oblong 48	Cases 5 oz. All 100s	Cases Other Sizes	Total Cases Actual Count	Total Standard Cases 48 - 1 lb.	Month
January	313	1,973	28	...	...	1,247	3,248	3,348	January
October*	1,734	20,258	20,086	263	679	...	41,286	41,086	October
November	561	5,758	5,462	...	...	...	11,220	11,220	November
December	449	4,801	4,179	...	...	...	8,980	8,980	December
Fall Total	2,744	30,817	29,727	263	679	...	61,486	61,286	Fall Total
Grand Total	3,057	32,790	29,755	263	679	1,247	64,734	64,634	Grand Total

*Season opened August 1. No fish reported in August, a small amount packed in September is reported with October.

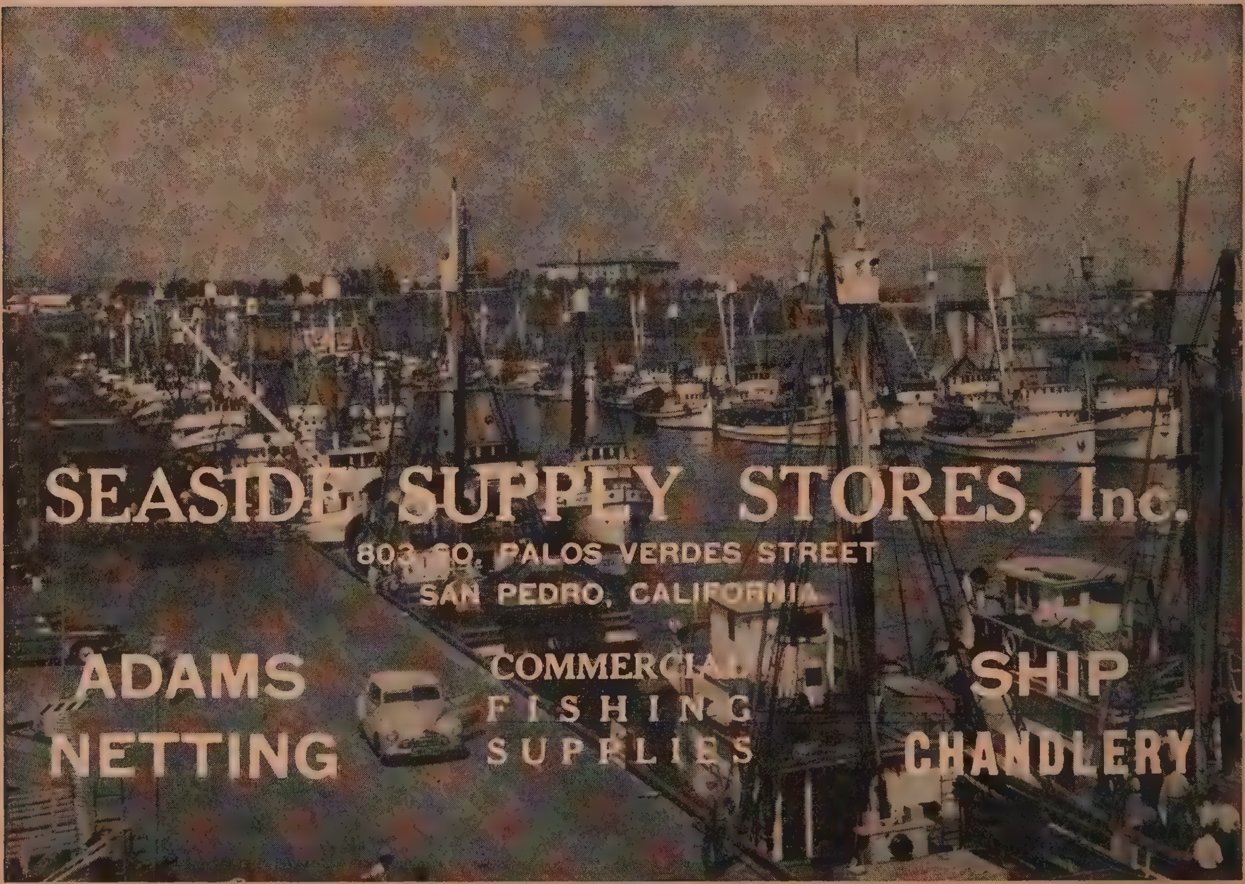
F. E. BOOTH COMPANY, INC.

PACKERS OF CALIFORNIA SEAFOODS

ANCHOVIES • SARDINES • MACKEREL • TUNA
SQUID • FISH MEAL AND FISH OIL
Also: Tomato Fish Sauce • Tomato Paste
Direct quotation to fish canners on request

280 BATTERY STREET
SAN FRANCISCO, CALIFORNIA

Plants Located At: San Francisco, Long Beach and Centerville, California



SEASIDE SUPPLY STORES, Inc.
803 SO. PALOS VERDES STREET
SAN PEDRO, CALIFORNIA

ADAMS NETTING

COMMERCIAL FISHING SUPPLIES

SHIP CHANDLERY

The more abundant 1947 and 1948 classes resulted in a partial recovery of the fishery in 1949-50 and 1950-51, but the numbers were not great enough to maintain a good seasonal production for some 300 seiners making the sardine fishery their main operation.

Some of the biologists engaged in the four-year study believe the scarcity of the sardine in California waters is due to natural causes; others feel that man has depleted the resource. The majority hold that the trouble lies in a combination of these forces.

The 1953 season opened for northern California waters on August 1, but not a single fish was caught in the first two months; then only a dab or two. Season opening for Southern California, October 1, was delayed due to negotiations over raw price. This was finally agreed upon at $100 per ton.

Wholesale price quoted in January for ovals in tomato sauce was $9.25 per case. At year's end no quotations were being made at all.

To bolster supply of the canned product, California packers turned to Japan, and imported possibly 200,000 cases of ovals in tomato sauce. National imports to October 1 totaled 7,049,787 lbs. net weight.

California imports of canned sardines to December 1 in addition to those from Japan included: Norway, 1,004,996 lbs.; Portugal, 145,097; Sweden, 10,331; French Morocco, 3,172; Holland, 12,422; Denmark, 6,283, and Canada, 58,751 lbs., all of these imports in oil.

Sardine Standards Sought

A Sardine Standards Committee, with Dr. Sven Lassen as chairman, and with Herbert C. Davis directing research, was set up by the California Fish Canners Association during the fall months.

The program called for collecting all scientific literature dealing with the classification and identity of "sardines" or likely to be so designated, both foreign and domestic.

Fish-Handling Pumps Employed

The scarcity of sardines was responsible for a technological development in the industry, with a number of canners installing fish-unloading pumps to cut the cost of transfer from vessel to cannery and to conserve the fish from damage in bailing.

With both staple "wet" fish, sardines and mackerel failing, packers turned to anchovies in 1953, and this turned out to be a major pack before the year ended.

By December 1, the total of 39,000 tons of anchovies had been brailed and 1,400,000 cases packed, in ½-lb. cans, 48s. This was far ahead of the 1952 production which was 26,838 tons and 867,523 cases. It was believed the pack during the latter

California Sardine Industry

	Catch, Tons	Oil, Gallons	Meal, Tons	Case Pack, 1-lb. Ovals or Equiv.
1937-38 SEASON				
San Francisco District	132,248	4,659,147	23,058	160,977
Monterey District	104,464	3,067,587	15,383	828,737
San Pedro - San Diego District	109,122	1,448,543	14,540	1,310,715
Season TOTALS	345,834	9,175,277	52,981	2,300,429
1938-39 SEASON				
San Francisco District	200,361	7,804,909	34,751	224,112
Monterey District	180,090	5,462,066	28,859	1,063,363
San Pedro - San Diego District	148,125	2,235,082	22,603	1,286,301
Season TOTALS	528,576	15,502,057	86,213	2,573,776
1939 - 40 SEASON				
San Francisco District	211,471	9,313,706	36,324	286,639
Monterey District	227,231	7,090,963	34,568	1,763,401
San Pedro - San Diego District	93,176	985,323	12,161	1,084,928
Season TOTALS	531,878	17,389,992	83,053	3,134,968
1940-41 SEASON				
San Francisco District	117,817	4,809,853	20,541	288,413
Monterey District	165,145	5,197,570	25,805	1,219,846
San Pedro - San Diego District	171,747	2,390,887	24,776	1,608,207
Season TOTALS	454,709	12,398,310	71,122	3,116,466
1941-42 SEASON				
San Francisco District	185,921	7,162,343	29,935	854,709
Monterey District	249,717	7,222,683	36,309	2,429,804
San Pedro - San Diego District	147,825	2,113,939	18,859	1,870,601
Season TOTALS	583,463	16,498,965	85,103	5,155,114
1942-43 SEASON				
San Francisco District	115,586	4,467,454	19,114	413,165
Monterey District	183,158	5,590,335	28,255	1,429,652
San Pedro - San Diego District	202,597	3,090,994	29,614	1,862,073
Season TOTALS	501,341	13,148,783	76,983	3,704,890
1943-44 SEASON				
San Francisco District	126,132	5,018,816	20,064	425,487
Monterey District	212,383	6,578,416	32,840	1,563,036
San Pedro - San Diego District	135,007	2,185,779	20,608	1,161,750
Season TOTALS	473,522	13,783,011	73,512	3,150,273
1944-45 SEASON				
San Francisco District	136,337	5,616,063	22,258	271,528
Monterey District	234,613	8,305,401	34,920	887,190
San Pedro - San Diego District	177,465	3,781,148	26,795	1,102,662
Season TOTALS	548,415	17,702,612	89,973	2,261,380
1945-46 SEASON				
San Francisco District	83,483	3,581,808	12,765	456,001
Monterey District	142,282	4,803,560	20,297	1,220,579
San Pedro - San Diego District	170,325	2,846,216	23,481	2,073,963
Season TOTALS	396,090	11,231,584	56,543	3,750,543
1946-47 SEASON				
San Francisco District	2,846	65,002	519	6,590
Monterey District	26,818	755,674	3,893	155,329
San Pedro - San Diego District	198,052	3,314,193	26,870	1,931,544
Season TOTALS	227,716	4,134,869	31,182	2,093,463
1947-48 SEASON				
San Francisco District	383	4,440	37	5,793
Monterey District	14,492	260,375	1,756	222,867
San Pedro - San Diego District	95,362	1,458,983	11,762	1,258,660
Season TOTALS	110,237	1,723,798	13,555	1,487,320
1948-49 SEASON				
San Francisco District	1,688	16,590	127	34,197
Monterey District	52,203	783,627	5,566	914,624
San Pedro - San Diego District	127,350	1,436,939	13,301	2,113,897
Season TOTALS	181,241	2,237,156	18,994	3,062,718
1949-50 SEASON				
San Francisco District	17,798	607,004	2,917	81,040
Monterey District	133,570	3,431,286	17,513	1,606,767
San Pedro - San Diego District	186,392	2,402,760	23,343	2,632,305
Season TOTALS	337,760	6,441,050	43,773	4,320,112
1950-51 SEASON				
San Francisco District	....	538,132	2,408	67,698
Monterey District	....	1,132,643	6,443	759,172
San Pedro - San Diego District	....	4,802,054	34,660	4,444,120
Season TOTALS	....	6,472,829	43,511	5,270,990
1951-52 SEASON				
San Francisco District	321	6,350	32	4,342
Monterey District	24,864	327,149	2,217	495,542
San Pedro - San Diego District	101,356	1,121,770	10,855	1,867,978
Season TOTALS	126,541	1,455,269	13,104	2,367,862
1952-53 SEASON				
San Francisco District	......	....	......	....
Monterey District	285	2,345	14	5,740
San Pedro - San Diego District	3,330	15,529	186	64,819
Season TOTALS	3,615	17,874	200	70,559
OFF-SHORE FLOATING REDUCTION PLANTS (not included above)				
1936-37 Season	239,257	9,034,041	39,876	....
1937-38 Season	74,334	2,479,731	12,389	....
1938-39 Season	57,212	2,021,810	9,535	....

For California Sales

R. M. SLOAN CO.

NATIONAL FISHERIES INSTITUTE INC.

Dependable Sales and
Merchandising Specialists . . .
Complete Southern California
Market Coverage . . .

SEAFOOD BROKERS

1231 EAST SEVENTH ST.
Telephone—Madison 6-5291

LOS ANGELES
Teletype—LA 634

BUILDING and MAINTENANCE

FISH BOATS

WATER TAXIS

FERRIES

FIRE BOATS

TUG BOATS

Headquarters for

KERMATH and STERLING
Engines and Parts

•

EXIDE BATTERIES

•

BENDIX depth recorders

•

AUTOMATIC PILOTS

•

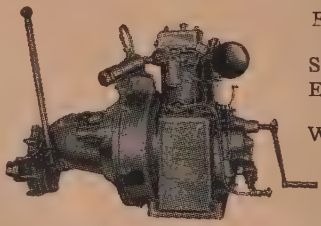
PROPELLERS
Most Sizes up to 40 inches in stock

•

MARINE HARDWARE
Call Terminal 2-7264

FELLOWS and STEWART
INCORPORATED
TERMINAL ISLAND
CALIFORNIA

COVENTRY VICTOR MARINE DIESEL ENGINE



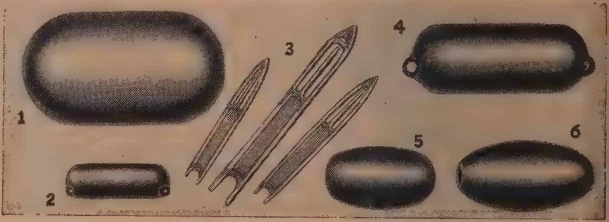
EASY COLD STARTING
SMOOTH RUNNING
ECONOMICAL — COMPACT
WORKING PARTS TOTALLY ENCLOSED

Fully Epicyclic Gear Box — 2:1 Reduction
7 h.p. - 358 lbs. 9 h.p. - 378 lbs. 12 h.p. - 408 lbs.

Complete Information on Request

COVENTRY VICTOR ENGINES Box 106 Gardena, Calif.

Plastic Floats and "Flexso" Needles



1. Jiant Float, 5"x9", 5"x15", 5"x24" or longer. Tube ⅞".
2. Eyelet Deep Water Gill Net Float, 1⅝"x4⅝".
3. Flexso Needles made in twelve sizes.
4. Eyelet Seine Float, 3¼"x8". Weight 5½ oz.
5. Oval Tube Gill Net Float, 2⅞"x5". Tube ½".
6. Diver Net Float, 3"x6". Tube 9/16".

Write for full information

J. H. SHEPHERD SON & CO., Elyria, Ohio (Est. 1907)

SALT

That Has Stood the Test for Over 45 Years

All Grades :: High Quality :: Fair Prices

Long Beach Salt Co.

2476 Hunter Street, Los Angeles 21, Calif.
PROMPT SERVICE BY TRUCK OR RAIL
PHONE: TUcker 1424

When You Want

THE FINEST FISHING VESSEL

WOOD OR STEEL

Large or small, all Colberg boats have the same qualities—they are built by the finest craftsmen to conform to the highest standards of the boat builder's art.

COLBERG BOAT WORKS
STOCKTON, CALIFORNIA

months could have been greater, but packers were not too interested in the product. Packed in tomato sauce, 5-oz. cans, 100s, canned anchovies were quoted wholesale at from $6.75 to $7.75 per case; in 1-lb. ovals, tomato sauce, 48s, at $7.60.

The squid fishery had supplied canneries with a little more than 3,000 tons to early December, and from that raw material 151,195 cases, talls, 48s, were packed. End of the year price for a slow-moving product was $3.60 to $3.75 per case, in brine.

•

YEAR 1953 WAS one of the poorest on record for central and northern California fish canners.

No sardines were caught in the area at all, and the anchovy catch, on which many a canner had based hopes as a substitute for sardines, was only some 9,790 tons in the area, as compared to 22,782 tons for the year previous.

The herring catch also was down, with 880 tons landed in the area during the year, as compared to 4,562 tons in 1952.

Jack mackerel amounted to about 415 tons in 1953 as compared to 137 tons in 1952. Squid amounted to 853 tons in 1953 as compared to a catch of 1,272 tons the year before.

Canneries on Monterey Bay and in San Francisco packed 240,324 cases of anchovies in 1953 as compared to 597,715 in 1952. Some 21,487 cases of herring were packed in the area, as compared to 19,809 cases in 1952. In 1953 9,744 cases of jack mackerel were packed, as compared to 19,809 cases the year before.

In 1953 some 39,574 cases of squid were packed. The above figures for catch and pack were for the entire calendar year of 1952 but for January-October, inclusive, only, for 1953.

Among the canneries that were active in the region were: Washington Fish & Oyster Co., F. E. Booth Co., Inc., Bell Smoked Fish Co., J-D Packing Co., and Northern Packing Co., all of San Francisco. At Moss Landing was the Santa Cruz Canning Co., and at Monterey were San Xavier Fish Packing Co., Oxnard Canners, Inc.; Peninsula Packing Co., Hovden Food Products Co., and California Packing Co. At Antioch was the Hickmott Canning Co., and in Eureka was the Tom Lazio Fish Co.

Immediate Future Prospect Admittedly Not Bright

The future of the sardine for the next two years on the Pacific Coast does not look bright, according to the progress report of the California Cooperative Oceanic Fisheries Investigations, for the period July 1, 1952, June 30, 1953, which was released last winter.

CALIFORNIA CANNED FISH PACKS

YEAR	Albacore Cases	Tuna-Bluefin Cases	Tuna-Skipjack Cases	Tuna-Yellowfin Cases	Tuna-Chunks, Flakes	Tuna-Tonno Cases	Bonito Cases	Yellowtail Cases	Mackerel Cases	Salmon Cases	Sardine Cases	Shad Cases	Squid Cases	Pet Food Cases	Misc. Cases	TOTAL CASES	YEAR
1926	66,001	70,283	274,970	165,561	8,162	131,553	44,186	18,940	550	11,761	2,163,755	....	23,536	....	63,794	3,043,052	1926
1927	126,699	50,008	382,175	366,395	7,631	207,496	22,277	24,530	10,961	8,435	2,625,412	6,485	....	....	44,396	3,882,900	1927
1928	99,751	132,342	194,491	503,077	16,733	117,821	18,900	5,657	388,471	4,585	2,815,330	7,475	2,056	....	124,809	4,431,498	1928
1929	132,638	89,728	347,132	612,810	18,613	119,805	47,674	15,296	611,503	5,503	3,941,459	9,791	6,056	....	53,925	6,012,433	1929
1930	145,531	309,604	268,130	878,382	29,561	74,985	69,341	21,343	127,333	11,202	3,069,524	1,796	25,271	....	127,236	5,159,239	1930
1931	144,973	46,462	278,398	613,344	11,441	36,220	38,254	2,041	101,217	14,070	1,794,991	....	19,827	44,372	4,855	3,158,465	1931
1932	65,377	8,687	305,007	678,313	16,291	42,247	42,114	3,115	89,176	2,005	1,001,845	201	....	67,256	50	2,323,052	1932
1933	49,391	7,581	273,041	937,792	13,090	41,200	36,560	33,518	760,126	3,076	1,422,860	....	1,740	112,725	1,369	3,698,293	1933
1934	82,182	332,411	267,328	1,097,912	30,502	55,163	52,554	9,816	1,214,491	820	2,051,726	....	4,257	80,224	1,104	5,324,084	1934
1935	112,149	438,501	338,493	1,254,478	41,658	82,205	128,065	81,177	1,761,186	874	2,529,262	5,039	8,781	122,826	2,269	6,920,625	1935
1936	53,884	334,377	480,260	1,418,045	24,873	58,537	104,078	112,128	1,228,348	....	2,820,742	13,124	12,282	128,384	5,178	6,803,815	1936
1937	91,159	215,535	763,916	1,582,477	50,438	137,737	129,572	47,480	793,780	147	2,983,204	6,361	5,531	179,230	100	6,986,616	1937
1938	289,389	324,198	372,998	1,284,179	64,476	67,404	125,854	71,234	958,890	....	2,443,469	11,244	20,167	287,403	545	6,341,557	1938
1939	356,675	218,476	469,570	1,927,292	72,240	77,340	159,090	24,614	968,718	....	3,326,162	12,665	23,926	384,427	150	8,021,345	1939
1940	145,741	313,210	836,223	2,005,819	227,320	184,232	87,367	68,482	1,435,113	....	3,188,089	15,743	34,603	832,091	100	9,374,133	1940
1941	92,240	168,702	433,029	1,325,645	170,549	33,838	176,859	129,307	843,747	1,125	5,395,284	68	21,587	1,027,903	16	9,820,485	1941
1942	239,505	279,098	719,574	759,908	150,976	23,479	32,288	37,392	614,090	....	3,846,785	24,945	941	197,403	....	6,941,643	1942
1943	425,741	174,865	383,167	696,209	502,515	26,599	35,625	73,268	839,312	1,475	3,400,106	11,516	119,237	....	11,131	6,699,736	1943
1944	435,123	374,004	363,857	827,483	757,800	15,365	8,490	19,848	986,422	1,691	3,725,657	12,541	141,808	....	45,206	7,738,949	1944
1945	480,615	297,858	548,174	1,497,991	548,454	16,198	49,816	17,336	589,617	5,457	3,884,582	....	184,141	....	225,971	8,346,210	1945
1946	381,271	333,001	648,289	2,213,692	826,793	....	108,306	44,045	716,668	9,817	3,102,232	589	643,843	....	56,689	9,085,235	1946
1947	286,272	370,893	904,451	2,642,354	742,038	33,762	243,994	133,734	1,522,199	18,754	1,814,050	1,778	229,967	1,087,040	199,115	10,230,401	1947
1948	797,035	98,473	930,235	3,335,759	850,760	22,663	158,253	153,428	971,646	22,786	3,203,028	2,477	369,762	1,153,802	204,741	12,274,848	1948
1949	861,737	46,336	1,068,215	2,694,947	1,762,223	82,859	20,312	53,767	924,104	1,801	4,286,034	893	88,217	1,249,366	20,265	13,161,076	1949
1950	1,125,463	11,186	734,528	1,632,625	4,497,839	257,356	8,263	14,073	1,410,541	4,279	5,430,439	1,948	84,675	2,060,709	85,827	17,359,751	1950
1951	607,230	....	....	1,586,142	4,793,574	162,277	14,356	87,489	1,040,300	1,266	3,052,642	1,078	224,884	1,593,176	431,465	13,595,879	1951
1952	962,063	....	....	1,547,310	5,443,228	129,502	46,509	181,261	1,573,745	3,115	109,633	1,375	1,616	1,751,006	724,522	12,474,885	1952

Bluefin, Skipjack and Yellowfin are combined under Yellowfin in 1951 and 1952.

California

BROKERS
IMPORTERS
EXPORTERS
•
EXCLUSIVE
SALES AGENTS

SINCE 1855

CANNED
TUNA
SARDINES
MACKEREL
SHRIMP
OYSTERS

OF THE UNIFORM HIGH QUALITY THAT HAS MADE THE FOOD PRODUCTS SOLD BY PARROTT & CO. FAMOUS SINCE 1855

PARROTT & CO.

231 SANSOME ST. • SAN FRANCISCO 4, CALIFORNIA

SOUTH COAST FISHERIES, INC.

TERMINAL ISLAND
CALIFORNIA

Fishing Vessel
REFRIGERATION

SAFEGUARD YOUR FISH & PROFITS!

Rely on Baker refrigeration, parts and experienced service for economical, efficient and dependable operation.

Baker Engineering Corporation

LOS ANGELES SAN PEDRO SAN FRANCISCO

WM. H. HUTCHISON Y ASOCIADOS, S.A.

MAZATLAN, MEXICO

Fish Netting

INTERNATIONAL FACTORY REPRESENTATIVES FOR FISHING, MARINE & ENGINE SUPPLIES.

Wire Rope

TELEPHONE MAZATLAN 3049 SAN PEDRO TERMINAL 21155

PAUL W. HILLER
315 AVALON BLVD. WILMINGTON, CALIFORNIA
MARINE MECHANICAL EQUIPMENT
TEL. TERMINAL 44-938

ESTABLISHED 1859

JACOB J. PERES & CO.
BROKERS
MEMPHIS, TENNESSEE

CALIFORNIA FISH CANNING PLANTS

In the table below, the company name is followed by that of the president, principal owner, or managing director. Location given is that of the plant, not necessarily that of the company headquarters. This is followed by one or more letters indicative of the plant products. These products are represented as follows: (a) canned sardines; (b) canned tuna; (c) canned mackerel; (d) other canned fish products.

MONTEREY BAY DISTRICT

Calif. Frozen Fish Co., San Ventimiglia	Monterey (a, d)
Calif. Packing Corp., Don T. Saxby	Monterey (a, d)
Carmel Canning Co., J. R. Perry	Monterey (a, d)
Edgewater Packing Co., Charles J. Broad	Monterey (a, d)
Enterprise Packers, Sebastian Sollecito	Monterey (a, d)
Ferrante Fisheries, Sal Ferrante	Monterey (a, d)
Hovden Food Products Corp., K. Hovden	Monterey (a, b, d)
Hovden Food Products Corp., K. Hovden	Moss Landing (a, b, d)
Monterey Canning Co., Magnus Flause	Monterey (a, d)
Oxnard Canners, Inc., James Tolagson	Monterey (a, b, c, d)
Peninsula Packing Co., G. H. Leutzinger	Monterey (a, b, c, d)
Pacific Vegetable Oil Corp., Frank Richey	Moss Landing (a, d)
San Carlos Canning Co., Wm. Hudson	Monterey (a, d)
San Xavier Fish Packing Co., Frank E. Raiter	Monterey (a, b, d)
Santa Cruz Canning Co., Joe Olivieri	Moss Landing (a)
Sea Beach Packing Co., Sal Palma	Monterey (a, d)

SAN FRANCISCO DISTRICT

Bell Smoked Fish Co.,Joe Tarantino	San Francisco (b, d)
F. E. Booth Co., Inc., A. H. Mendonca	San Francisco (a, b, d)
Hickmott Canning Co., J. H. Dempsey	Antioch (d)
J. D. Packing Co., James A. Davi	San Francisco (a, d)
Keystone Fisheries, John Hay	San Francisco (a, b)
Tom Lazio Fish Co., Tom Lazio	Eureka (b, d)
Northern Packing Corp., George Christo	San Francisco (a)
Ocean Picnic Sportsmen's Cannery, Paul Thurmond	Eureka (b, d)
Pacific Sea Products, A. Caito	San Francisco (b)
Paul's Cannery, Chester J. Paul	Crescent City (d)
Red Rock Fisheries, Paul Orloff	Pt. San Pablo (a)
Romeo Packing Co., Joe Romeo	Half Moon Bay (a, b, d)
Washington Fish & Oyster Co., of Calif., Tom Miller	San Francisco (b, d)

SAN PEDRO DISTRICT

California Marine Curing & Packing Co., Max J. Gorby	Terminal Island (a, b, c, d)
Coast Fisheries Divn. of Quaker Oats Co., J. R. Biven	Wilmington (a, b, c, d)
F. E. Booth Co., Paul Aisup	Long Beach (a, c, d)
Franco-Italian Packing Co., Joseph Mardesich	Terminal Island (a, b, c, d)
French Sardine Co., J. J. Bogdanovich	Terminal Island (a, b, c, d)
Harbor Canning Co., George DeLaTore	Wilmington (a, c)
Lido Fisheries, Inc., Nick Kovacevich	Long Beach (a)
Pan-Pacific Fisheries, Inc., Gerald Cigliana	Terminal Island (a, b, c, d)
Paramount Canning Corp., Walter Brewer	Newport Beach (a, b, c)
Seaside Fisheries Co., Harry H. Steele	Long Beach (a, c)
South Pacific Canning Co., M. D. Marsh	Long Beach (a, b, c, d)
Southern California Fish Corp., Larry W. Holland	Terminal Island (a, b, c, d)
South Coast Fisheries, Inc., P. A. Kuglis	Terminal Island (a, b, c)
Van Camp Sea Food Co., NK, IN & CP Plants, G. C. Van Camp	Terminal Island (a, b, c, d)
West Coast Packing Corp., Roy Roush	Newport Beach (a, c)

SAN DIEGO DISTRICT

High Seas Tuna Packing Co., John Xitco	Pt. Loma (b)
Van Camp Sea Food Co., Glenn Copeland	San Diego (b)
West Coast Pkg. Co., Albert Vignolo, Jr.	San Diego (b)
Westgate-California Tuna Packing Co., James B. Lane	San Diego (b)

PT. HUENEME DISTRICT

California Packing Corp., J. P. Lukes	Hueneme (a, d)
Malibu Canning Co., J. B. Lindsay	Hueneme (a, d)

The investigation program was started in 1949 to study the reasons behind sardine depletion. Since that time the Marine Research Committee states in its annual report, it has been recognized that there is no "specific sardine problem."

"The sardine problem," the report states, "is an integral part of the broader question of the state's marine resources."

The research is supported by a special tax on catches of sardines, anchovies, jack mackerel, and Pacific mackerel, and studies include these species. A special appropriation from the Legislature also helps finance the study.

Cooperating in the studies are: Stanford University, Hopkins Marine Station; The California Academy of Sciences; The California Department of Fish & Game; the U. S. Fish & Wildlife Service, South Pacific Fishery Investigations; and the University of California, Scripps Institution of Oceanography.

"As the studies progress," the report says, "it begins to seem more and more probable that it is a combination of several factors that has brought the sardine catch to its low level. "Until we can identify and measure each of the most important factors, no complete explanation can be given for this or a similar crisis which may overtake any of our marine fisheries."

Sardine Research Conclusions

Some conclusions from the report are:

1. The bulk of the sardine population today is concentrated in the waters off Baja California, where it is largely unavailable to sardine fishermen of the United States.

2. There are fewer sardines in California waters than ever before.

3. There is little reason to hope that sardine fishing in the next two years will reach the level attained in the years of prosperity.

4. The most numerous year class present is that spawned in 1952 and evidence points to its being smaller than the 1948 year class.

5. Anchovy and jack mackerel populations appear to be satisfactorily abundant. Pacific mackerel catches, on the other hand, point toward a low abundance of these fish throughout California waters.

6. We are able to give some clues as to the causes of the catastrophic decline in sardine landings but are not able to isolate any single primary reason.

Factors in Disaster

Among some of the discoveries made that might have a bearing on the lack of sardines are:

1. The California current meandered more in 1949 than in 1952, causing the appearance of a counter current near shore. The counter current brought warmer waters along the coast in 1949 than in 1952.

WHEN YOU'RE BUYING

WATERPROOF CLOTHING

IT PAYS TO ASK FOR

"The Original"

SNYDER'S NEOPRENE

TRADE MARK SNYDER STANDARD M. L. SNYDER & SON PHILADELPHIA, PA. TRADE MARK SNYDER STANDARD M. L. SNYDER & SON PHILADELPHIA, PA.

The combination of Du Pont's Neoprene, coated by hand on strong durable fabric AFTER SEWING, plus SNYDER QUALITY, prompts the smart buyer to

ACCEPT NO OTHER BRAND ! ! !

Try our other products too—

Rubber boots, gloves, aprons.
Oiled clothing, sleeves, aprons.
Trolling tubing, hose, belting.
Fire Extinguishers and recharges.

M. L. SNYDER & SON, INC.

71 Columbia St.
SEATTLE 4

149-151 Second St.
SAN FRANCISCO 5

3810-3838 So. Broadway Pl.
LOS ANGELES 37

---

keep your boat bone dry with
SEALER 900
"makes boats absolutely water-tight"

New! Marine Products' Radar Target gives low-cost all-weather radar protection for any size boat! Write for details.

Finest sealer made! Sealer 900 flows into seams, cracks, joints up to 1/8" in width. Being rubber, it expands and contracts — forms adhesive, flexible seal to keep water out. Plastic squeeze bottle easy to use — pointed tip controls flow. Sells for only $1.35 at marine, sporting goods and hardware stores. Used by thousands of boat owners.

There's nothing like Sealer 900 — imitated — never equalled!

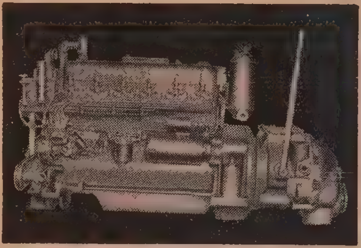
If your dealer can't supply you, order direct.

Also available in cans

Marine Products, Inc.

41 HIGH STREET OSHKOSH, WISCONSIN

POWER TO SPARE



FOR THE "WORKHORSE" FLEET

A built-in power margin in every RED WING engine assures you dependable performance under all conditions. Rugged, durable, easy-to-maintain RED WING's have been bringing cargo to port on schedule for more than half a century.

Whatever your power needs, there is a RED WING designed to fill them.

Waiting your inspection at the Boat Show are the following new RED WING diesels:

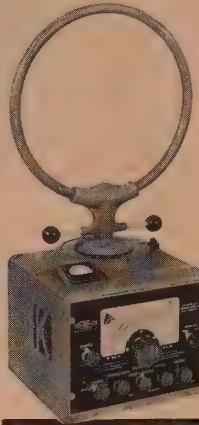
D4 35-45 H.P. medium duty diesel . . . 144 cu. in. displacement . . . for craft 22-35 feet.

D6 80-100 H.P. marine diesel . . . new series of 6-cylinder engines . . . displaces 300 cu. in.

D6 100-145 H.P. heavy duty diesel . . . 426 cu. in. displacement . . . second of new series for boats 30-50 feet.

SEND TODAY for your free copy of "Power to Spare", a complete catalog of diesel and gasoline marine engines . . . 10-200 H.P. made by **RED WING**

RED WING MOTOR & MANUFACTURING COMPANY
Dept. 104
Red Wing, Minn.



NEW KAAR D-31 Direction Finder–

FEATURING:

- ***NEW*** easy to read tuning meter
- ***NEW*** built-in speaker
- ***NEW*** improved tuning circuits

WRITE FOR DESCRIPTIVE LITERATURE

KAAR ENGINEERING CORP.
PALO ALTO • CALIFORNIA

NAVICOTE Marine Finishes

LAST LONGER

Above or Below the Water Line

HART and BURNS Inc. *Riverside, Calif.*
Manufacturers of DURAHART *Protective Coatings* *Dallas, Tex.*

2. Upwelling, the process that brings food elements to the surface, where sardines feed, occurs in more places than had been known before.

3. New methods have been found to measure upwelling, which may result in better food studies.

4. Since 1949 sardine spawning has progressively lessened both in amount and extent off California but there has been no noticeable change in eggs or larvae off central Baja California.

5. Young fish surveys indicate that no great numbers of sardines have survived from spawnings since 1948.

6. By 1952 all age groups of sardines were reduced to a low level except the six-month old 1952 year class; these fish are too young to contribute a large tonnage to the California fishery in the 1953-54 season.

1953 Season Opens With No Sardine Operations

Aug. 1, 1953, was just another midsummer day as far as the northern California sardine industry was concerned, instead of the opening of the sardine season, celebrated in years gone by as a day heralded in San Francisco and Monterey with boat whistles and loading purse seiners with supplies.

It was still the opening day of the sardine season but there were no sardines in sight. It was the sixth year of the sardine "famine," and Monterey canneries were placing orders for squid, mackerel, and anchovies. San Francisco canneries were interested in anchovies.

One brighter ray of light appeared when California anchovy packers were allowed to ship anchovies to the Philippines again, after a halt was brought in November, 1952, by the U. S. Food & Drug Administratino. Shipments of anchovies were allowed provided the fish is packed "sardine style." The labels may, but need not, read "Packed Sardine Style."

Gales, fire, and other disaster took their toll of the northern California purse seine fleet during the year. In March a shrieking 60-mph northwest gale drove seven vessels estimated as worth half a million dollars onto the Monterey beach.

The purse seiners **Petrina F.,** Frank Flores; **Cerrito Bros.,** Sal and Frank Cerrito; **New Hope,** formerly owned by Sal Ventimiglia; and **Rosanna,** formerly owned by Sal Ferrante, were badly damaged.

Torrente Bros., one of San Francisco's best known purse seiners, was declared a total loss after fire broke out as she was trolling for salmon off Bolinas.

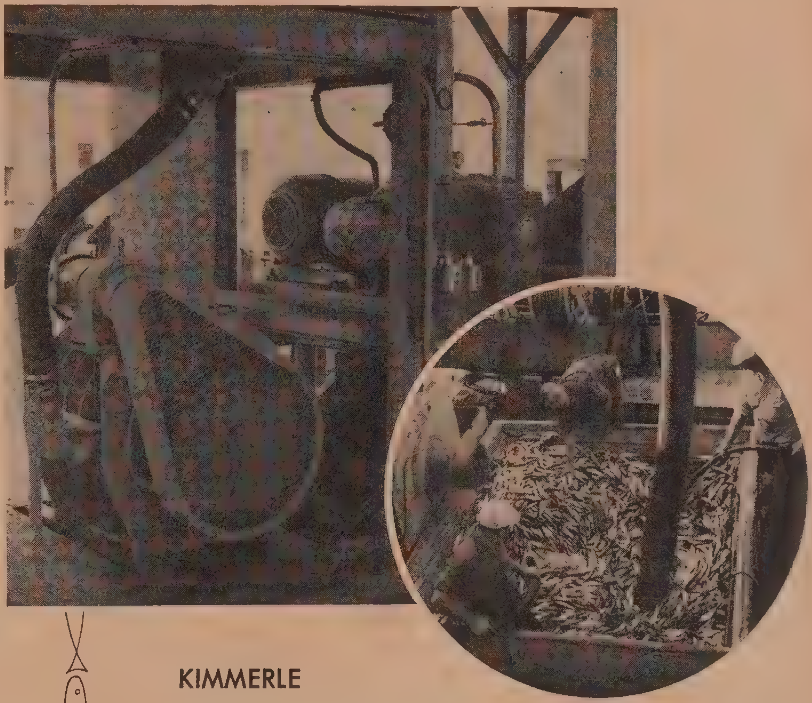
The boat **Two Sisters** picked up the crew of **Torrente Bros.,** Joe and his brother Mike, and the engineer, Bill Meadows, and a Coast Guard cutter put out the fire and towed the hulk to port.

Fire Destroys Two Monterey Sardine Plants

Fire, too, destroyed two big canneries on Monterey's Cannery Row, with an estimated loss of $400,000. The two were Sea Beach Canning Co., and Custom House Packing Co. The fire, which evidently started in the upper story warehouse of the Sea Beach cannery, a $300,000 plant, spread to the roof and to the Custom House cannery building adjoining. Custom House had been stripped of its machinery some time back, but $100,000 worth of processed fish meal had been moved out of the empty building only a week before, it was reported. The building was valued at $100,000. Sea Beach was completely equipped for fish canning and reduction.

Sardine processing plants continued to disappear from the San Francisco and Monterey scene. R. J. Roesling Co., San Francisco, purchased the Fish Dee Lish sardine reduction plant on Pt. San Pablo, and dismantled it. It was the seventh sardine reduction plant that the Roesling company had dismantled and sold.

The Custom House Packing Co., and Westgate-Sun Harbor plants in Monterey were also dismantled and the equipment sold. Central Packing Co. and Monterey Fish Products Co. were auctioned off by the RFC.



KIMMERLE
FISH ELEVATORS
SUCK THE CATCH FROM THE HOLD
STRAIGHT TO THE CANNERY CONVEYOR

— without back breaking brailing — in a fraction of the time — without damaging the fish. They attract commercial fishing boats to sell you their catch.

For information and comprehensive literature phone or write:
Marius Thisted

MELETRON
CORPORATION

PHONE: HO 3-4841

950 N. Highland Ave., Los Angeles 38

CALIFORNIA CANNED SARDINE PACK

(Cases)

YEAR	MONTEREY AND SAN FRANCISCO BAY DISTRICT							SAN PEDRO DISTRICT						SAN DIEGO DISTRICT	GRAND TOTAL	YEAR
	1-lb. Ovals	1-lb. Talls	½-lb. Cans Misc.	½-lb. Fillets	5-oz. Talls	Other Sizes	TOTAL	1-lb. Ovals	1-lb. Talls	½-lb. Cans Misc.	5-oz. Talls	Other Sizes	TOTAL	TOTAL		
1912	17,702	. . . .	. . . .	. . . .	. . . .	1,072	18,774	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	18,774	1912
1913	73,686	. . . .	. . . .	. . . .	. . . .	. . . .	73,686	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	73,686	1913
1914	80,834	. . . .	. . . .	. . . .	. . . .	. . . .	80,834	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	80,834	1914
1915	46,625	. . . .	. . . .	. . . .	. . . .	609	47,234	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	47,234	1915
1916	97,100	. . . .	. . . .	. . . .	. . . .	8,532	105,632	2,512	. . . .	. . . .	. . . .	3,296	5,808	54,655	166,095	1916
1917	331,065	. . . .	. . . .	. . . .	. . . .	29,809	363,472	131,347	. . . .	. . . .	. . . .	546,033	679,120	147,602	1,190,194	1917
1918	593,448	. . . .	. . . .	. . . .	. . . .	26,151	619,609	325,587	. . . .	. . . .	. . . .	433,374	758,961	106,418	1,484,979	1918
1919	805,884	. . . .	. . . .	. . . .	. . . .	27,084	832,968	125,784	. . . .	. . . .	. . . .	105,741	231,514	87,033	1,151,515	1919
1920	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	706,726	. . . .	. . . .	. . . .	. . . .	. . . .	244,900	111,370	1,062,996	1920
1921	287,954	. . . .	. . . .	. . . .	. . . .	10,975	298,929	77,048	. . . .	. . . .	. . . .	3,765	80,813	9,370	389,112	1921
1922	353,188	. . . .	. . . .	. . . .	. . . .	1,479	354,667	340,938	. . . .	. . . .	. . . .	6,096	347,034	27,140	729,034	1922
1923	580,984	. . . .	. . . .	. . . .	. . . .	10,001	590,985	490,064	. . . .	. . . .	. . . .	2,769	492,833	48,205	1,132,023	1923
1924	631,774	. . . .	. . . .	. . . .	. . . .	22,416	654,190	693,133	. . . .	. . . .	. . . .	4,491	697,624	63,624	1,420,128	1924
1925	737,743	. . . .	. . . .	. . . .	. . . .	37,119	774,862	920,191	. . . .	. . . .	. . . .	2,685	922,876	56,041	1,753,779	1925
1926	1,158,133	. . . .	31,483	. . . .	. . . .	2,867	1,192,483	861,088	. . . .	. . . .	. . . .	21,702	861,481	88,419	2,163,755	1926
1927	1,341,872	. . . .	36,363	237	17,808	826	1,397,106	1,046,453	. . . .	. . . .	119,815	. . . .	1,166,268	62,038	2,625,412	1927
1928	1,511,535	4,569	43,754	159	80,252	2,495	1,642,764	945,676	9,652	. . . .	146,724	. . . .	1,099,052	73,514	2,815,330	1928
1929	2,039,526	54,618	16,969	11	75,101	2,187	2,188,412	1,438,159	76,271	8,072	168,039	33,753	1,724,294	28,753	3,941,459	1929
1930	1,579,408	74,043	19,692	391	141,524	3,751	1,818,809	863,254	106,460	2,909	228,965	8,138	1,209,726	40,989	3,069,524	1930
1931	1,004,215	43,722	11,280	. . . .	40,375	337	1,099,929	498,996	59,853	11,931	119,930	1,467	691,637	3,425	1,794,991	1931
1932	459,756	4,467	3,276	88	17,726	2,528	487,481	415,874	36,292	. . . .	54,197	. . . .	506,363	7,641	1,001,845	1932
1933	838,533	47,575	4,604	. . . .	38,013	1,532	930,217	365,750	57,969	. . . .	53,996	4,336	482,051	10,592	1,422,860	1933
1934	1,091,158	48,769	6,527	8,361	67,913	2,675	1,225,413	531,619	119,506	. . . .	164,735	. . . .	815,860	10,463	2,051,736	1934
1935	1,126,466	218,523	39,566	91,525	128,168	27,704	1,631,952	615,808	135,531	25,519	112,264	251	889,373	11,437	2,532,762	1935
1936	1,089,683	202,148	89,280	113,516	124,490	41,946	1,661,063	586,038	259,793	132,488	156,649	749	1,135,717	22,863	2,819,643	1936
1937	679,317	227,806	51,068	73,785	68,164	9,284	1,109,424	761,776	634,215	263,729	200,060	1,509	1,861,289	12,491	2,983,204	1937
1938	721,036	58,168	104,419	97,277	154,488	16,287	1,151,675	600,532	318,691	212,064	162,245	. . . .	1,293,532	19,056	2,464,263	1938
1939	1,248,747	310,168	125,251	141,900	138,217	28,538	1,992,821	627,524	308,896	217,100	178,072	1,520	1,333,112	229	3,326,162	1939
1940	933,955	249,195	158,300	151,518	225,975	18,384	1,737,327	664,241	398,960	230,771	156,681	72	1,450,725	37	3,188,089	1940
1941	1,601,506	1,092,720	234,093	182,703	296,568	54,961	3,462,551	689,210	870,256	216,972	151,384	2,136	1,929,958	2,775	5,395,284	1941
1942	802,795	663,309	8,283	75,386	94,755	59,695	1,704,223	619,881	1,342,030	85,776	90,672	2,918	2,141,277	1,285	3,846,785	1942
1943	1,045,451	832,934	128,438	. . . .	20,208	36,037	2,063,068	400,504	846,314	44,516	26,507	2,235	1,320,076	697	3,383,841	1943
1944	1,051,397	1,088,918	61,828	20,584	374	18,255	2,241,356	434,414	963,551	23,297	. . . .	1,040	1,422,302	. . . .	3,663,658	1944
1945	766,554	951,346	81,019	10,075	. . . .	102,391	1,911,385	444,649	1,480,175	48,215	. . . .	. . . .	1,973,039	. . . .	3,884,424	1945
1946	123,063	171,698	39,376	10,233	. . . .	9,050	353,420	602,008	2,073,679	73,125	. . . .	. . . .	2,748,812	. . . .	3,102,232	1946
1947	108,289	71,691	72,995	155,677	. . . .	4,181	412,833	510,760	802,243	29,327	57,260	. . . .	1,399,590	1,627	1,814,050	1947
1948	400,841	197,865	527,346	16,645	. . . .	994	1,143,691	611,927	970,569	347,991	120,413	. . . .	2,050,900	6,587	3,201,178	1948
1949	869,104	491,196	344,148	12,434	127,741	6,291	1,850,914	822,053	1,112,939	194,690	305,438	. . . .	2,435,120	. . . .	4,286,034	1949
1950	427,416	224,569	6,533	44,843	99,657	24,179	827,197	1,476,695	2,256,213	355,087	451,365	63,882	4,603,242	. . . .	5,430,439	1950
1951	377,754	75,721	2,785	12,285	95,257	7,120	570,922	1,030,080	971,971	74,273	368,611	36,785	2,481,720	. . . .	3,052,642	1951
1952	5,730	10	. . . .	. . . .	. . . .	. . . .	5,740	60,116	34,694	1,513	1,317	2,450	100,090	. . . .	105,830	1952
1953	1,160	. . . .	. . . .	. . . .	. . . .	. . . .	1,160	31,630	29,755	263	679	1,247	63,574	. . . .	64,734	1953

NOTE:– Figures for 1953 are preliminary totals from official sources Those for previous years have been corrected from statistics of the California Division of Fish and Game. Full segregation of the various sizes is not available for years prior to 1926 and is estimated for 1950.

*Where sizes are not segregated, they are combined with 1-lb talls. Figures for years prior to 1950 are given in cases "as they run", without reduction to standard cases. The great majority of the production, however, consists of 48-lb. cases. Figures for "Other Sizes" in 1950 and after have been reduced to standard cases, equivalent to cases of 48-1 -lb. ovals.

OLDEST FISHING SUPPLY HOUSE IN LOS ANGELES HARBOR

MARINE HARDWARE CO.

Handling Only Products of Proven Quality and Reputation for Many Years, We Have Featured These Well-Known Lines—

GOLD MEDAL NETTING &

The Greatest Name in Netting for 109 Years—
THE LINEN THREAD COMPANY

GOLD MEDAL SEINE TWINE

CAPE COD COPPER
TRIPLE C
AMERICAN MARINE PAINT CO.
LIFE PRESERVER BRAND
AMP
HI-TEX
WHITE
AMERICAN MARINE PAINT COMPANY

FEWER HAUL-OUTS

with TRIPLE C PRODUCTS

"Fishermen's Choice Since 1903"

Cape Cod Triple C Copper
Fishermen's Hull White Hi-Tex
Enamel - Spar Varnish.

50 YEARS OF PROVEN QUALITY

AMERICAN MARINE PAINT CO.

NEOPRENE
WATER-
PROOF
AND
PROTECTIVE
CLOTHING
—for 50 years!

JOHNSON'S BEST SEATTLE, WASH.

JOHNSON'S "BEST"

85% of Pacific Coast fishermen demand Johnson's "Best"—made of heavier fabrics.

GEORGE A. JOHNSON CO., SEATTLE

PLYMOUTH MANILA ROPES The Rope You Can Trust — Engineered for Your Job.

NET-LIFE PRESERVATIVE Proved best by test in thousands of net dippings.

BETHANIZED WIRE ROPE PURSE LINES Exclusive Protective Coating.

AMERICAN TAR COMPANY Seattle Coal Tar . . . Cold Dip Tar.

Thousands of Other Items . . . including: Life Preservers - Anchors - Chains - Oars - Fire Fighting Equipment - Pipe - Crane - Valves and Fittings - Boston & Lockport Blocks - Wilcox Crittenden Hardware - Perkins Marine Lamps.

YOU CAN ALWAYS DEPEND ON "MARINE HARDWARE"

Branch
San Pedro
Co-operative Bldg.
Berth 73
TE - 2-7505

Main Store
509 Beacon St.
San Pedro
TE - 2-7505
NE - 6-1863

Branch
Terminal Island
304 Sardine St.
TE - 2-7505

SARDINES

FRANCO-ITALIAN PACKING CO.

For 30 years a conservative packer with
excellence of quality and service
our main objective.

Chicken Salad
Fancy Tuna

SuperioR
White Meat Tuna in Glass

Gem of the Sea
Fancy White Meat

Mackerel—SEA ACE—Sardines

JOS. M. MARDESICH JR., Pres.

FRANCO-ITALIAN PACKING CO.

223 Fish Harbor Wharf **TE 2-4275** **Terminal Island, Calif.**

CAMPBELL MACHINE CO.

MARINE REPAIRS

"THE FLEET'S IN"

Now Operating
3
FLOATING
DRY
DOCKS
2—1000-Ton
1— 400-Ton
—and—
4— 650-Ton
Marine Railways

Since 1906 Our 'Phone Number Has Been—**MAin 2455**

We are now shedding tears for Jan. 24, 1954 it was changed to **Belmont 2-2455**. This change was beyond our control.

SAN DIEGO — Foot of 8th Ave. — **California**

ANCHOVIES

Coming almost from nowhere under impulse provided by failure in sardines and shortage in mackerel, Pacific anchovies in 1954 shot into third place, volume-wise, among Pacific canned fish, and joined the select company of American seafoods whose production exceeds 1 million cases.

NEWCOMER among Pacific canned fish rocketed into third place in 1954, when anchovies to the count of 1,132,000 cases were canned in California. This put them in the No. 3 spot among Pacific canned fish, following only tuna and salmon, and well out in front, volume-wise, of canned mackerel and sardines.

Moreover, it must be recognized that the third-place position was achieved not on the basis of default through the failure of the sardine fishery and the scarcity of mackerel, but because anchovies achieved the million-case class.

It is true that this little fish has been canned on the Pacific for a number of years, usually as a specialty pack in various fancy and near-fancy styles; and that for the past two or three years it has achieved some importance as a volume item, picking up some of the business formerly commanded by California sardines.

However, in no year before 1954 has the volume of anchovies canned attained anything like 1 million cases. Reason for the sharp upturn in anchovy packing in 1954 doubtless was the continued sardine failure in Southern California, which led packers there to join the Monterey industry in canning the little fish.

The fishermen were willing to fish anchovies, and found it worth their while at the substantial price which they commanded by virtue of their new marketability.

Anchovies Are Denied Labelling As Sardines

The great majority of the anchovies canned in California are packed after the style which has long been established for California sardines. Labeling restrictions in the United States, however, forbid the labeling of anchovies as sardines, regardless of the style of packing, and regardless of how closely the canned anchovies may resemble products long accepted as sardines. It has never been possible on an economic basis to pack and sell Pacific anchovies in the fancy manner widely employed in Spain, Portugal and Italy. However, the Pacific species is a true anchovy, possessed of excellent characteristics as a foodfish.

Some export markets accept anchovies under a sardine-style label, and have found them an excellent product, whether as a sardine substitute or as an economical, desirable new product with place and standing of its own.

Anchovy Abundance Large

The abundance of anchovies is very large. The fish are found all along the Pacific Coast from Southern California to British Columbia. During the period of the active pilchard fishery along the coast of Oregon and Washington qualified observers were of the opinion that the abundance of anchovies in those waters actually exceeded that of sardines; and it is at least possible that this has been true in California even during the great years of the sardine fishery.

Anchovies are usually taken by means of purse seines, after the same manner as sardines, but require smaller mesh to prevent them from gilling excessively.

Much smaller than sardines, the anchovies also are not nearly so fat. They are difficult to reduce for the manufacture of meal and oil, as the very tender fish tend to cook-up so thoroughly in the conventional reduction process that it is difficult to press them. The cooked fish have a tendency to pass through the screen perforations in the press, which puts an excessive load on the centrifugal system for recovering and purifying the oil.

In the can, anchovies are tender, with white meat, and are very readily digestible.

Ovals Rise in Importance

During the entire period that anchovies have been canned, the principal containers employed have been the half-pound oblong type and the 8-ounce squat buffet. In 1953, with the increasing demand for the fish as a substitute for California sardines, there was a surprising swing to the one-pound oval tin, which in that year moved into second place, ahead of the buffet can.

1953 -CALIFORNIA ANCHOVY PACK - 1953

Month	Pounds Delivered	1 lb. Oval	1 lb. Tall	8 oz. Buffet	8 oz. Oblong	5 oz. Round 100s	Total	Month
January	6,196,000	13,208	...	11,448	30,995	27,463	83,114	January
February	9,712,000	21,590	3,452	10,212	29,484	54,522	119,260	February
March	4,056,000	10,856	4,130	6,757	32,435	12,084	66,262	March
April	7,220,000	7,662	5,089	27,229	39,850	24,396	104,226	April
May	14,760,000	29,158	2,697	62,005	62,764	98,428	255,052	May
une	15,370,000	38,041	31	9,445	25,557	125,822	198,896	June
uly	3,948,000	8,825	...	...	8,528	30,276	47,629	July
August	3,380,000	10,210	...	...	9,154	34,488	53,852	August
September	6,442,000	37,845	...	24,174	...	33,675	95,694	September
October	3,296,000	14,238	...	9,806	...	15,019	39,063	October
November	4,694,000	18,999	...	13,948	...	14,603	47,550	November
December	*2,462,000	*7,892	...	*6,740	...	*7,190	*21,822	December
Total	81,536,000	218,524	15,399	181,764	238,767	477,966	1,132,420	Total

December data for Southern California only, with pack distribution as to can sizes estimated. December data for Central California not available.

grounds a considerable distance off the continental shore of Southern California, and this served to support active packing of this variety.

California's canned-mackerel production of 1953 was less than 40% of the 1952 pack, for 1953 was the poorest Mackerel year since 1945, when 587,798 cases were produced in the state.

The year opened with a good carryover in first hands and this helped fill orders in the early months. However, when the first six months passed 16,977 tons had been delivered, against 14,738 tons for the same period in 1952, packers hoped, in view of the increase, that it would be a good year. But, while 1952 showed excellent catches during the past half of the year, last year the final six months grew progressively worse.

Pacific mackerel practically faded from the picture in 1953. In consequence, packers were compelled to withdraw quotations on Pacific. However, to keep the record straight, had there been any, the wholesale price would have been $9.00. Jack mackerel opened the year, quoted at $7.75 per case, F.O.B. western terminals and closed quoted at $8.50.

Unable to fill orders for canned mackerel from the domestic fishery, California packers were importing from a new source of supply, South Africa. The product was coming in via Gulf ports and being distributed from there. Only a small quantity came in, but it was expected packers might use this source, as well as Japan, in 1954, if the California fishing is again poor.

MARKETS

TUNA

ASSISTED by huge sums spent by leading packers on advertising campaigns and aggressive promotion, particularly tie-in programs with other food staples, 1953 canned tuna sales over the national field moved upward at about the same rate as in 1952.

Whether sales at the retail level reached 10,000,000 cases was uncertain as the year closed. Some California packers believed that figure was not reached; others that it was slightly exceeded. The general opinion was that sales were 6 to 7% ahead of the previous year, following a similar pattern of the past several years.

While the final official figures were not available, the California industry evidently set a new record for the state.

Due to vastly increased imports of raw tuna, all along the Pacific Coast, the various packing locations generally ran ahead of 1952.

Packers' prices, f.o.b. West Coast terminals, firmed up during the year, rising from 25c to $1.00 per case in the various catagories; and canners' position was generally better because of a decline in various "allowances."

On advertised brands, White Meat fancy opened at $16.00, closed at $16.50. White Meat, chunks, $13.50 to $14.25. Light Meat, fancy was quoted in early January at $14.75 and at year's end at a top of $15.75. Private label was quoted: White Meat, fancy, $14.00 to $15.50 at close; Light Meat, fancy, began $13.00, closed at $13.75 per case.

The carryover into 1954 was estimated as rather less than 2,000,000 cases in first hands. Prospects for the first three months of 1954 indicated the possibility of an acute shortage of canned tuna.

Star-Kist Foods Inc., (formerly French Sardine Company) in 1953 introduced egg noodles and tuna, packed in 1-lb. tall cans. California Marine Curing & Packing Company followed. Specialty packs of canned tuna for 10 months of last year totaled 132,551 cases, on basis of standard 48 round ½-lb. cans. Among these specialty packs were, in addition to above, tuna paste, tuna packed in glass, etc.

Indicative of the influence imports of raw tuna has on production is shown in the fact that in the initial six months of the year, when domestic Albacore is not available, California packers put up nearly half a million cases of Albacore, more than double the pack for the same period in 1952, which was also canned from Japanese frozen imports.

In a 1953 analytical study by the U. S. Fish and Wildlife Service involving a preference survey of 2,473 housewives through the four geographical regions of the country, it was found the Pacific states were high in use of canned tuna; the South relatively low.

COMMERCIAL FISHERMEN
In Mexican-Central American Waters
PACIFIC TOWBOAT & SALVAGE CO.
Offers Standby Salvage and Towing Service
Pier "C", Berth 20 Long Beach 70-6487
Long Beach 2, Calif. Cable Address: PACTOW
"KANAK"—WA 6710

ARTHUR DE FEVER
Naval Architect & Marine Surveyor
Consultation *Re-Conditioning* *Survey*
Ship Design *Inspection* *Appraisers*
701 East Harbor Drive, P.O. Box 1049
San Diego 12, California
Phone No. F-9-2159

FORSTER
SHIP BUILDING CO., INC.
SHIP BUILDERS—ENGINEERS
MARINE WAYS—REPAIRS
Foot of Ferry St. Terminal Island
Phone TE 2-4527

YOU MAKE MONEY ON THE BEACH, TOO
when you bring your boat to
NATIONAL STEEL AND SHIPBUILDING CORPORATION
HARBOR DRIVE AT 28th
Phone Franklin 9-8065 ● San Diego 12

A name fishermen have trusted
for more than 30 years
AL LARSON BOAT SHOP
General Machine Repair Work
Boat Builders
Terminal Island, Calif. TE 2-4521

G. BRUCE NEWBY
Consulting Naval Architect
and
Marine Engineer
Telephone 966-35 4549 East Anaheim St.
Long Beach 4, California

THE FISHERMAN'S YARD
24-HOUR SERVICE ● REPAIRS
1000-Ton Drydock ● Marine Railways ● Complete Shops
HARBOR BOAT BUILDING CO.
Fish Harbor—Terminal Island, California

NET-LIFE

Net and Line Preservative

1. Easy to apply, no heating, dipping time—5 to 10 minutes. Quick to dry—6 to 12 hours.
2. Highest fungicide, bactericide, and germicide value.
3. Uniform penetration to core of the net.
4. No burning of net. Not harmful to handle. No after stickiness.
5. A truly homogeneous solution. No settling or separation of ingredients.
6. Manufactured under controlled, scientific conditions by the pioneer of this modern type of preservative.

ALL OF WHICH ADD UP TO GREATER ECONOMY THRU' SAVINGS IN NETTING, TIME, AND MANPOWER.

TECHKOTE COMPANY, Inc.
820 W. Manchester Ave., Inglewood, California

MACKEREL

Always characterized by a cyclic pattern of alternating periods of several years of abundance followed by a term of greatly reduced availability, the mackerel fishery of California in 1953 produced only 596,000 cases of the canned product, much less than half the 1,573,000 cases produced the year before.

AFTER SIX YEARS in which the California canned mackerel pack had averaged more than 1 million cases per year, production dipped in 1953 to only 596,000 cases, the smallest pack since 1945, and with that exception the smallest since 1932.

This condition was not due in any way to economic factors, as demand was good, but resulted directly from a falling-off in fishing, particularly for the Pacific species.

Jack mackerel was found in substantial abundance on new fishing

1953 - California Mackerel Pack - 1953

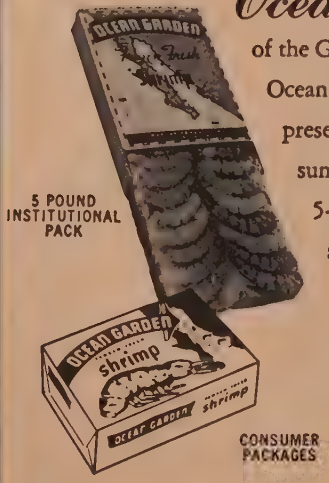
PACIFIC MACKEREL				MONTH	JACK MACKEREL				All Mackerel Cases
Pounds Delivered	Cases 1-lb. Cans	Cases Other Sizes	Total Cases		Pounds Delivered	Cases 1-lb. Cans	Cases Other Sizes	Total Cases	
34,000	81	...	83	January	1,330,000	4,812	537	5,349	5,432
26,000	22	...	22	February	160,000	622	104	726	748
...	...	...	...	March	2,304,000	24,450	6,527	30,977	30,977
...	478	...	478	April	15,340,000	152,877	5,426	158,303	158,781
...	39	...	39	May	4,718,000	40,979	100	41,079	41,118
...	159	...	159	June	10,074,000	98,545	...	98,545	98,704
106,000	1,023	...	1,023	July	11,458,000	115,880	...	115,880	116,903
144,000	1,387	...	1,387	August	988,000	9,489	...	9,489	10,876
302,000	3,425	...	3,425	September	3,198,000	33,777	...	33,777	37,202
2,364,000	24,524	...	24,524	October	1,842,000	18,290	...	18,290	42,814
3,736,000	37,841	...	37,841	November	1,266,000	13,503	...	13,503	51,344
160,000	1,400	...	1,400	December	...	...	...	...	1,400
6,872,000	70,381	...	70,381	TOTALS	52,678,000	513,224	12,694	525,918	596,299

CALIFORNIA CANNED MACKEREL

Year	SAN PEDRO DISTRICT			SAN DIEGO DISTRICT			MONTEREY	GRAND TOTAL (Full Cases)	Year
	*1-lb.Cans (Full Cases)	†Other Size Cans (Full cases)	Total (Full cases)	1-lb. Cans (Full Cases)	Other Size Cans (Full Cases)	TOTAL (Full Cases)	Total (Full cases) ‡		
1926	....	268	268	4	5	9	....	277	1926
1927	10,725	....	10,725	....	118	118	....	10,843	1927
1928	357,136	2,337	359,473	25,110	239	25,349	1,030	385,852	1928
1929	477,570	27,006	504,576	86,246	3,720	89,966	1,476	595,572	1929
1930	122,870	....	122,870	4,250	39	4,289	117	127,276	1930
1931	100,912	....	100,912	305	....	305	....	101,217	1931
1932	84,385	4,058	88,443	184	....	184	....	88,627	1932
1933	578,902	38,163	617,065	100,883	4,729	105,612	7,722	730,309	1933
1934	942,507	126,538	1,069,045	115,654	12,303	127,957	61,083	1,257,085	1934
1935	1,409,922	195,771	1,605,693	105,081	4,436	109,517	46,026	1,761,236	1935
1936	990,360	60,250	1,050,610	113,075	9,533	122,608	55,139	1,228,357	1936
1937	727,656	14,309	741,965	30,482	3,011	33,493	13,856	789,314	1937
1938	828,284	71,741	900,025	44,856	3,125	47,981	5,643	958,649	1938
1939	869,474	20,323	889,797	73,608	1,247	74,855	2,604	967,256	1939
1940	1,311,778	47,304	1,359,082	39,467	768	40,235	142	1,399,459	1940
1941	811,467	6,096	817,563	19,484	....	19,484	6,700	843,747	1941
1942	579,053	9,479	588,532	17,456	3,663	21,119	4,539	614,190	1942
1943	827,040	....	827,040	4,255	....	4,255	7,997	839,312	1943
1944	970,772	13,324	984,096	266	....	266	2,060	986,422	1944
1945	584,318	1,658	585,976	....	....	....	3,641	589,617	1945
1946	602,458	33,772	636,230	....	....	....	80,438	716,668	1946
1947	1,298,820	58,589	1,357,409	....	....	....	164,790	1,522,199	1947
1948	767,662	43,668	811,330	224	101	325	158,991	970,646	1948
1949	853,433	15,968	869,401	....	....	....	54,703	924,104	1949
1950	1,059,877	17,940	1,077,817	....	....	....	331,628	1,409,445	1950
1951	988,139	28,091	1,016,230	...	...	...	24,070	1,040,300	1951
1952	1,507,204	44,223	1,551,427	...	...	...	22,318	1,573,745	1952
1953	583,605	12,694	596,299	...	...	...	...	596,299	1953

*Practically all in 1-lb. Talls. † Largely ½-lb. Flats. ‡ Includes San Francisco.

NOTE:– Pacific Mackerel and Jack Mackerel are combined in this table. District segregation since 1951 not available.


OCEAN GARDEN
Fresh
Shrimp
5 POUND INSTITUTIONAL PACK
OCEAN GARDEN
shrimp
OCEAN GARDEN
shrimp
CONSUMER PACKAGES

Oceans of Quality From the clear blue waters of the Gulf of California comes a shining harvest of ocean goodness . . . Ocean Garden Shrimp. Rushed to packing plants and frozen fresh to preserve the delicate shrimp flavor, Ocean Garden guarantees consumer acceptance by uniform size, sealed in flavor, and firm texture. 5-pound layer pack with heavy ice-block glaze means guaranteed satisfaction to institutional users. 12-ounce frozen fresh green shrimp, 10-ounce frozen breaded, and 5-ounce frozen fried household pack offer complete selection for all consumers.

OCEAN GARDEN
SHRIMP

MARINE PRODUCTS COMPANY • SAN DIEGO 12, CALIFORNIA

MEXICO
PACIFIC FISHERIES

Shrimp production from Mexico's Gulf of California and coastal waters of the Pacific recovered substantially in the last half of 1953. Prices during the year also showed improvement; and this, with the larger volume, served to restore much of the industry's prosperity.

SHRIMP from Mexico's Pacific fishery showed a sharp upturn as the first half of the 1953-54 season closed. With high prices for the product prevailing, Mexican freezer operators and trawler companies were in far better shape at the end of 1953 than at close of the previous year.

The 1953-54 season began in August and by mid-December 11,750,000 lbs. had arrived in Southern California. To December 31, 1952, the half-season tonnage was 8,533,834 lbs.

When 1953 began the fishery, extending from the upper waters of the Gulf of California to Salina Cruz, some 2,000 miles, was in financial difficulties because of poor fishing. Scarcity of green shrimp was noted until the close of the 1952-53 season with July.

In an effort to stabilize the industry, and save it from bankruptcy, the Mexican government passed a law prohibiting importation of foreign-built fishing vessels, and also forbade building of additional boats to the fleet by Mexican shipyards. Replacements for trawlers lost was allowed.

Wholesale quotations, f.o.b. west coast, for top quality, layer pack, brand names, were high and steady as 1953 ended. The year 1953 began with premium grades quoted at: Under-15, 85c per lb. An advance to 95c per lb. was in effect at year's end, and in-between wholesale prices had exceeded $1.00, with higher counts correspondingly at top levels.

The Mexican Pacific industry had serious problems early in the year. Efforts were made, through the Camara Nacional de la Industria Pesquera, Mexico City, a semi-official organization, to prohibit the wier system, particularly in vicinity of Mazatlan, whereby the natives block entrances of the vast bays, stopping the shrimp from going out to open waters to spawn.

A comparison between the 1951-52 and 1952-53 seasons shows how the fishery declined:

	Pounds 1951-52	 1952-53
Aug.	23,900	286,150
Sept.	479,650	563,700
Oct.	4,592,746	2,762,494
Nov.	4,611,411	3,021,237
Dec.	3,635,035	1,900,251
Jan.	2,298,486	1,403,031
Feb.	1,899,707	1,073,424
March	1,151,750	994,982
April	671,250	1,087,283
May	1,656,611	1,093,685
June	1,680,046	1,172,374
July	1,726,485	1,082,616
	24,407,077	16,441,227

The new shrimp beds discovered the year before at Magdalena Bay failed to produce. Grounds in vicin-

1953-FISHERY PRODUCTS IMPORTED FROM MEXICO-1953

(ENTERED THROUGH CALIFORNIA AND ARIZONA)

Species	Pounds											
	Nov. 1952	Dec. 1952	Jan. 1953	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Total
Fish:													
Cabrilla	...	...	...	...	...	...	3,050	14,610	...	13,525	...	...	31,185
Corbina													
Fresh & Frozen	...	17,944	...	1,861	14,895	98,412	12,124	950	1,025	22,264	...	...	169,475
Sea Bass: Wht & Blk	...	...	...	...	...	...	...	...	4,100	...	2,667	...	6,767
Shark	...	...	...	...	...	...	...	11,838	...	...	...	...	11,838
Totuava	...	50,121	103,016	176,574	327,380	7,590	97,916	15,276	2,500	...	...	...	780,373
Tuna, Albacore	...	...	...	146,480	88,809	202,366	...	...	...	...	...	...	437,655
Unclassified													
Fresh & Frozen	41,670	119,286	74,918	76,322	91,954	92,396	107,150	50,101	70,851	96,726	26,741	18,408	866,523
Dried, salted	...	...	...	1,714	1,980	2,624	...	...	...	1,536	...	...	7,854
Total	41,670	187,351	177,934	402,951	525,018	403,388	220,240	92,775	78,476	134,051	29,408	18,408	2,311,670
Shellfish:													
Abalone: Canned	235,136	221,184	109,208	19,536	13,600	76,704	311,776	450,690	388,222	538,704	542,204	187,232	3,094,196
Dried	...	10,700	20,100	...	620	...	...	...	500	...	...	12,629	44,549
Clams, incl. Clammeat													
Fresh & Frozen	2,805	9,801	18,564	25,519	146	18,230	41,279	60,392	174,573	255,160	151,181	2,964	760,614
Mussels													
Fresh & Frozen	...	...	...	...	...	...	...	...	...	...	2,220	...	2,220
Shrimp													
Fresh & Frozen	2,554,042	1,900,251	1,403,041	1,073,424	994,982	1,087,283	1,094,135	2,172,374	1,082,616	179,970	498,934	3,839,078	17,880,130
Spiny Lobsters	340,330	324,030	295,525	435,250	343,835	...	...	...	...	...	...	260,410	1,999,380
Total	3,132,313	2,465,966	1,846,438	1,553,729	1,353,183	1,182,217	1,447,190	2,683,456	1,645,911	973,834	1,194,539	4,302,313	23,781,089
Other Fishery Products:													
Livers: Sea Bass	...	...	...	4,797	7,844	...	1,276	...	...	...	...	...	13,917
Shark	6,281	18,893	8,969	7,980	...	26,587	24,402	5,713	2,200	41,047	21,595	...	163,667
Meal	...	33,500	115,500	...	...	...	...	...	...	287,300	...	...	436,300
Shark Fins	1,318	1,978	...	1,907	...	1,480	3,060	1,775	9,853	13,261	6,807	...	41,439
Total	7,599	54,371	124,469	14,684	7,844	28,067	28,738	7,488	12,053	341,608	28,402	...	655,323
Grand Total	3,181,582	2,707,688	2,148,841	1,971,364	1,886,045	1,613,672	1,696,168	2,783,719	1,736,440	1,449,493	1,252,349	4,320,721	26,748,082

MEXICO

MEXICAN SHRIMP EXPORTS THROUGH CALIFORNIA AND ARIZONA

1951-52

MONTH	Fresh Pounds	Frozen Pounds	Total Pounds
November '51	605,256	4,006,146	4,611,402
December	313,604	3,321,431	3,635,035
January '52	128,019	2,170,467	2,298,486
February	92,774	1,806,933	1,899,707
March	232,900	918,850	1,151,750
April	50,728	620,522	671,250
May	30,896	1,625,715	1,656,611
June	18,831	1,488,875	1,507,706
July	7,435	1,363,735	1,371,170
August	400	285,750	286,150
September	...	563,700	563,700
October	300,664	2,461,830	2,762,494
Total	1,781,507	20,633,954	22,415,461

1952-53

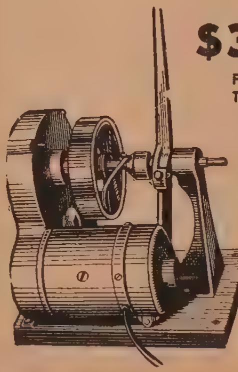
MONTH	Fresh Pounds	Frozen Pounds	Total Pounds
November '52	92,212	2,461,830	2,554,042
December	19,617	1,880,634	1,900,251
January '53	9,243	1,393,798	1,403,041
February	10,494	1,062,930	1,073,424
March	9,750	985,232	994,982
April	10,274	1,077,009	1,087,283
May	24,170	1,069,515	1,093,685
June	39,822	2,132,552	2,172,374
July	6,700	1,075,916	1,082,616
August	...	170,970	170,970
September	...	498,934	498,934
October	117,531	3,721,547	3,839,078
Total	339,813	17,530,867	17,870,680

ity of Guaymas were not productive, although Mazatlan was much better. The customary blue shrimp (Stylirostris) was cleaned out early in 1953. What saved the situation was the brown variety (Vanamei), caught in deeper waters of the Gulf of California in around 25 fathoms.

The 1953-54 season opened for bay fishing, and though August and September proved no better than the previous year, as soon as open-water trawling became legal, October 1, an immediate improvement was noted. October proved more than 1,000,000 lbs. better than the same month in 1952; and November, with over 5,000,000 lbs., was 2,000,000 lbs. ahead of November 1952.

Some changes were noted in contracts made by U. S. importers and distributors with Mexican fishing and freezing companies. Marine Products Company, San Diego, subsidiary of Wilbur-Ellis Company, maintained its leading position as U. S. importer, with its "Ocean Garden" brand. It had contracts for deliveries from the Guaymas concerns of Productos Marinos, Mariscos Congeladora; Pesquera de Topolobampo, Topolobampo, Sin.; "Mar Bermejo," Santa Rosalia, Lower California; and from freezers to the south, Empacadora Calidad, and Empacadores del Pacifico. Wilbur-Ellis continued its arrangements with Productos Congelados, Guaymas, and others.

METAL MARINE PILOT
for True-Course Automatic Steering



Price
$3.00
F. O. B.
Tacoma

Manufactured by
Wood Freeman
342 Golden Gate Ave., Fircrest
Tacoma 3, Washington
Phone PRoctor 2791

A new importing company, Crest Importing Company, San Diego, headed by Jack Willis, had contract arrangements with Mazatlan freezer concerns and others; Hector Ferreira's Pesquera E Industrializadora de Guaymas, was distributing his production through Rubenstein & Sons, Dallas, Tex.

Pedro Pinson, head of Refrigeradora del Noroeste, Mazatlan, Sin., was elected president of the Shrimp Association of the Americas, at its annual meeting July 23 at Mexico City. Hector Ferreira was chosen secretary.

Japanese Shrimp Shipments Are Second

Attracted by high prices in the U. S., a number of countries sent frozen shrimp into California during 1953, largest among them being Japan. That country also secured rights to fishing shrimp at Costa Rica and sent two trawlers there, with intention of shipping some 200 tons of frozen shrimp into this country during the season. Such tonnage, however, did not materialize during the period.

Imports through California ports to December 1 were:

	Lbs.
Japan	4,295,728
Canal Zone and Panama	176,340
Argentina	53,422
Costa Rica	9,980
Holland	5,004
Peru	507
Australia	100
	4,541,081

Miscellaneous Mexican Sea Products Ease-Off

Mexico's declining abalone fishery, centered along the northern coast of Lower California, with canneries at Sauzel, Ensenada and Cedros Island, packing mainly for export in 1 lb. tall cans for Oriental consumption, showed another sharp loss in production in 1953.

To December 15 only 2,775,125 lbs. had crossed the Mexican border, compared to 3,055,095 lbs. for 1952.

Imports of spiny lobsters, frozen and cooked, from Lower California camps also showed a slight decline from the previous year, 1,893,685 lbs. against 1,818,204 lbs. in 1953, this to December 15.

Clam meats, from the Pisco variety found along the western coast of Lower California, imported for canning in Southern California in ½-lb. round cans, increased in 1953 from slightly over 500,000 lbs. to better than 600,000 lbs.

Lower California Fish Canneries

Company	Location	Products
Pesquera del Pacifico, S. de R. L. Francisco A. Morales, Jr., Gen. Mgr.	Sauzal	Sardines Mackerel Meal and Oil
Pesquera del Pacifico, S. de R. L. Luis Ojeda Mellson, Plant Mgr.	Cedros Island	Abalone
Cia. Maritima Industrial y Mercantil, S. de R. L. Francisco A. Morales, Jr., Gen. Mgr. Manuel Murillo, Plant Mgr.	Ensenada (Plant at Turtle Bay)	Abalone
La Industrial de Ensenada Victor Salazar, Gen. Mgr.	Ensenada	Mackerel Sardines
Pesquera Peninsular, S. de R. L. Roberto Rivas Cordova, Mgr.	Ensenada	Abalone
Empacadora del Pacifico, S. A. Francisco Alvarez, Owner-Mgr.	Ensenada	Sardines Mackerel
Empacadora de Baja California, S. de R. L. Ernesto Ruffo, Owner-Mgr.	Ensenada	Abalone Albacore
Cia. Productos Marinos Romera Cabral Jimenez, Gen. Mgr.	Cape San Lucas	Abalone Clams Tuna

BRITISH COLUMBIA HERRING PRODUCTION

Year	Fish Landed Tons	CANNED HERRING Cases				Fresh and Bait Tons	Herring Meal Tons	Herring Oil (Imperial) Gallons
		1-lb. Talls	1-lb. Ovals	1/2-lb. Ovals	Total Full Cases			
1953 Spring Season	12,011	...	...	...	10,230	51	1,790	363,200
1953 Fall Season	132,576	...	...	...	75,312	452	21,937	2,608,399
1953 Grand Total	144,587	...	...	...	85,542	503	23,727	2,971,599
1952 Spring Season	90,236	...	...	...	2,764	1,764	16,221	1,428,206
1952 Fall Season	...	...	...	...	...	...	...	...
1952 Grand Total	90,236	...	...	...	2,764	1,764	16,221	1,428,206
1951 Spring Season	72,925	...	...	...	116,674	23,820	13,388	949,801
1951 Fall Season	107,103	...	...	...	102,536	32,340	17,059	2,320,994
1951 Grand Total	180,028	...	...	...	219,210	56,160	31,447	3,270,795
1950 Spring Season	74,621.00	...	...	...	2,475	150.34	14,604.35	988,372
1950 Fall Season	114,258.00	...	...	...	61,152	605.64	17,961.08	2,308,736
1950 Grand Total	188,879.00	...	...	...	63,627	755.98	32,565.43	3,297,108
1949 Spring Season	76,546.62	2,613	...	...	2,613	2,103.35	13,361.50	548,432
1949 Fall Season	106,259.00	1,000	74,162	225	75,387	1,051.48	16,075.10	2,317,113
1949 Grand Total	182,805.62	3,613	74,162	225	78,000	3,154.83	29,436.60	2,865,545
1948 Spring Season	87,915.01	79,128	215,050	21,829	315,007	1,589.56	12,757.87	751,064
1948 Fall Season	112,705.18	...	...	...	90,202*	554.75	18,244.07	2,019,508
1948 Grand Total	200,620.19	79,128	215,050	21,829	405,209	2,144.31	31,001.94	2,770,572
1947 Spring Season	42,006.34	250,595	176,203	4,125	430,923	3,183.05	4,109.20	200,581
1947 Fall Season	77,412.98	219,635	698,786	10,748	929,719	1,045.25	7,212.09	1,092,057
1947 Grand Total	119,419.32	470,230	874,989	14,873	1,360,642	4,228.30	11,321.29	1,292,638
1946 Spring Season	29,376.48	71,537	61,290	21,975	154,802	3,304.71	3,437.30	251,838
1946 Fall Season	67,691.61	80,281	886,889	40,802½	1,007,972½	5,718.73	4,364.25	644,777
1946 Grand Total	97,068.09	151,818	948,179	62,777½	1,162,774½	9,023.44	7,801.55	896,615
1945 Spring Season	61,906.03	80,001	127,202	55,418	262,621	3,558.05	8,350.96	490,214
1945 Fall Season	70,193.36	67,296	1,056,310	30,290	1,153,896	1,131.10	4,420.45	610,643
1945 Grand Total	132,099.39	147,297	1,183,512	85,708	1,416,517	4,689.15	12,771.41	1,100,857

*Sizes of cans not designated.

★ ★ ★ ★ ★ WASHINGTON DIESEL

PROVEN DEPENDABILITY plus the assurance of responsibility on the part of the manufacturer have led fishing vessel owners to choose Washington diesels again and again for over 32 years.

Washington diesel engines are built from pattern to final inspection in one big eight acre plant, with completely integrated facilities. Each installation is further safeguarded by expert engineering counsel, efficient service and parts availability for years to come.

Range of models from three to eight cylinders, 90 to 1000 horsepower, 277 to 450 rpm.

WASHINGTON IRON WORKS

THE FIRST WASHINGTON DIESEL EVER BUILT IS STILL IN COMMERCIAL OPERATION

WASHINGTON IRON WORKS

1500 6TH AVENUE SOUTH *Since 1882* SEATTLE 4, WASHINGTON

CRAB

Always volatile, always shifting with variations in abundance of crabs and demands of markets, Pacific crab canning went to Alaska in 1953—almost wholly.

The Ketchikan area, drawing its crabs from international waters in Dixon Entrance and Hecate Strait, dominated the year's yield.

CRAB CANNING centered in Alaska in 1953, with the Pacific Northwest production—and particularly that of Washington—scanty as the low-cycle which has marked this fishery in recent years continued its swing. Washington and Oregon both were short, far short, in crab canning, with the strong, rising and perhaps permanent fresh and frozen demand commanded almost all the crabs the fishermen could catch.

The Pacific—or "Dungeness"—crab fishery centered at Ketchikan, where the fleet serving the Pacific Pearl of Alaska cannery two years before pioneered the crab fishery of the international waters of Dixon Entrance and Hecate Strait. This proved the dominant factor in the business, with the one cannery producing more than half of the Territory's crab pack, and well-toward-half of the entire 1953 output of Pacific crab.

King Crabbing Rises In Cook Inlet Waters

An exceptionally interesting feature of the entire crab business was the rapid rise of the King crab fishery centering in lower Cook Inlet. While some King crabs were canned in this region, the production went primarily into the frozen trade, either packed King crab meat frozen in packages or frozen-in-the-shell, either whole crabs or legs alone.

1953-PACIFIC CANNED CRAB-1953

COMPANY	Cannery Location	Cases 48 Halves Flats
ALASKA		
Aurora Packing Co.	Cordova	150
Coastal Glacier Seafoods, Inc.	Hoonah	1,416
Cooper Delta Seafoods	Cordova	400
Fox Seafoods Co.	Sitka	485
Island Seafoods Co.	Kodiak	1,617
King Crab	Kodiak	360**
Parks Canneries	Seldovia	3,385*
Pacific Pearl of Alaska	Ketchikan	12,030
Thompson Co., N. E.	Kake	2,000
TOTAL ALASKA		21,843
BRITISH COLUMBIA		
Tulloch Fisheries, Ltd.	Vancouver	167
Miscellaneous		14,833
TOTAL BRITISH COLUMBIA		15,000
WASHINGTON		
Burk Canning Co.	Bellingham	553
Chinook Packing Co.	Chinook	137
Kaakinen Fish Co.	Westport	100
Nelson Crab & Oyster Co.	Tokeland	5,000
TOTAL WASHINGTON		5,790
OREGON		
Columbia River Packers Assn.	Astoria	1,315
Point Adams Packing Co.	Hammond	3,641
Port Orford Fish Co.	Port Orford	1,005
TOTAL OREGON		5,961
CALIFORNIA		
Tom Lazio Fish Co.	Eureka	146
TOTAL DUNGENESS CRAB		45,032
TOTAL KING CRAB		3,708
GRAND TOTAL, ALL CRAB		48,740

* 3348 cases King Crab 37 cases Dungeness. ** King Crab.
NOTE:– All cases have been counted on the basis of 48 halves, but no attempt has been made to distinguish between cases of the two kinds of halves in which the pack was put up – "standard" and "tuna-size".

OREGON CRAB LANDINGS

Year	Dozen												
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1945	17,006	19,199	17,315	41,706	47,675	43,305	10,820	10,413	4,226	9,135	9,807	12,419	243,026
1946	17,065	21,815	30,732	34,074	80,626	34,414	13,694	5,783	4,568	8,859	12,834	14,814	279,278
1947	22,660	27,457	40,555	46,527	78,649	50,317	20,806	7,188	3,813	3,686	8,621	3,971	314,250
1948	35,592	37,973	63,516	87,353	96,885	34,841	15,171	9,098	4,969	4,205	2,662	9,206	401,471
1949	49,617	22,681	52,571	60,613	73,273	45,310	19,539	11,433	4,828	4,770	8,914	20,312	373,861
1950	22,414	26,186	38,315	35,513	46,910	27,012	6,997	4,145	3,914	3,095	9,730	25,864	250,095
1951	34,161	39,080	41,361	49,042	54,348	11,740	4,764	3,742	2,065	...	...	...	240,303
1952	19,864	23,672	28,024	42,256	45,842	11,150	5,268	3,577	2,233	5,618	15,981	14,780	218,265
1953	15,790	28,080	49,241	58,797	60,383	18,252	6,143	3,822	2,769	.....	.....	......	243,277

PACIFIC CANNED CRAB

(Shown in Standard Cases of 48 Half-pound Cans)

Year	Alaska	Washington	Oregon	California	American Total		British Columbia	North American Total	Year
					Cases	Value			
1953	21,843	5,790	5,961	146	33,740	869,456	15,000	48,740	1953
1952	22,647	9,076	9,624	237	41,584	1,173,211	5,148	41,584	1952
1951	26,753	19,885	39,878	1,500	88,016	2,332,424	4,159	88,016	1951
1950	25,927	23,270	28,075	1,260	78,532	1,868,680	7,283	85,815	1950
1949	13,198	65,004	36,652	...	114,854	2,547,765	4,839	119,693	1949
1948	26,076	104,362	56,982	3,500	187,420	4,264,622	3,500	190,920	1948
1947	10,158	54,756	34,582	6,624	106,120	2,037,904	2,481	108,601	1947
1946	15,792	19,263	29,106	15,194	79,356	2,271,965	1,455	80,811	1946
1945	15,760	9,070	896	...	25,726	398,898	...	25,726	1945
1944	13,376	16,524	10,968	...	40,868	653,888	385	41,253	1944
1943	9,386	18,332	20,874	...	48,592	782,173	...	48,592	1943
1942	7,766	26,052	45,338	...	79,156	1,266,496	885	80,041	1942
1941	11,126	13,232	13,346	...	37,704	311,822	3,386	41,090	1941
1940	12,828	8,634	3,792	...	25,254	178,021	3,794	29,048	1940
1939	11,978	2,716	8,406	...	23,100	184,254	2,049	25,149	1939
1938	...	...	...	...	27,016	258,375	2,157	29,173	1938
1937	...	...	...	...	27,394	269,699	1,546	28,940	1937
1936	...	...	...	...	14,758	124,925	...	14,758	1936
1935	...	...	...	...	13,840	106,832	...	13,840	1935
1934	...	...	...	...	22,869	184,052	...	22,869	1934
1933	...	...	...	...	17,564	134,330	...	17,564	1933
1932	...	...	...	...	9,314	73,112	...	9,314	1932
1931	...	...	...	...	263	2,104	...	263	1931

The trend in the American King crab fishery seems more and more to trend toward freezing and less and less toward canning. This is undoubtedly the result in large degree of the resumption of crab canning operations by the Japanese. After a lapse of 12 years — during which the Pacific War was fought, the Japanese crab fishermen and canners came back to the Alaskan side of Bering Sea in 1953 and pressed far into Bristol Bay. As result of their competitive pressure, there remained in 1953 only one American King crab operation in Bering Sea, where in recent years there have been several.

While the trawler **Deep Sea** worked the Bering Sea grounds in courageous competition with the Japanese, other Americans tended to concentrate their activities more in the waters south of the Alaska Peninsula, where crab populations in territorial waters would be safe from the declines which follow in the wake of Japanese fleets and fishing methods.

●

Canned Salmon Industry Launches Market Promotion

Industry-wide promotion and market development was undertaken on behalf of canned salmon in 1953 with the launching of a program which gathered headway through much of that year and entered 1954 with a particularly active Lent and pre-Lent promotion schedule.

The campaign was conducted on a basis of publicity, promotion and merchandising helps, and was featured by joint advertising enterprises with related products.

Editorial research conducted in 1953 by **Pacific Fisherman** showed annual expenditure for canned salmon advertising is running above $850,000 annually.

Washington Crab Landings

YEAR	Puget Sound	Grays Harbor	Willapa Harbor	Columbia River	TOTAL
	Pounds*	Pounds**	Pounds**	Pounds**	POUNDS
1936	441,892	451,890	865,194	......	1,758,976
1937	500,104	643,234	1,441,352	3,428	2,588,118
1938	521,180	387,728	1,831,716	......	2,740,624
1939	441,122	620,004	2,153,496	......	3,214,622
1940	428,692	1,134,182	3,341,754	......	4,904,628
1941	514,184	1,293,222	3,968,152	206,984	5,982,542
1942	989,186	2,262,696	2,134,818	249,304	5,636,004
1943	1,267,024	2,732,090	1,052,550	56,660	5,108,324
1944	1,790,118	2,622,316	1,529,196	83,326	6,024,956
1945	1,993,398	1,961,978	1,439,204	4,838	5,399,418
1946	2,284,810	3,674,536	2,022,004	121,335	8,102,685
1947	1,512,808	6,599,380	3,822,288	38,184	11,972,660
1948	1,933,426	9,080,584	4,241,256	614,184	15,869,450
1949	1,355,148	7,633,157	3,204,240	950,006	13,142,551
1950	2,373,316	2,171,072	1,427,042	399,440	6,371,166
1951	1,547,502	1,321,400	1,806,096	154,970	4,829,968
1952	915,807	1,373,708	1,892,842	82,580	4,264,937
1953	1,296,741	1,538,624	2,091,802	81,261	5,008,428

* Conversion: 22 lbs. per dozen.

** Conversion: 24 lbs. per dozen.

NOTE: — 1953 Puget Sound figures are incomplete but include best available estimates to Dec. 31, 1953.

Canned Shad and Shad Roe

YEAR	Oregon-Washington		California		TOTAL, PACIFIC COAST		YEAR
	Shad (full cases)	Shad Roe (4-doz. $\frac{1}{2}$'s)	Shad (full cases)	Shad Roe (4-doz. $\frac{1}{2}$'s)	Shad (full cases)	Shad Roe (4-doz. $\frac{1}{2}$'s)	
1920	8,251	892	3,936	908	12,187	1,800	1920
1921	871	6	...	...	871	6	1921
1922	1,410	174	...	...	1,410	174	1922
1923	2,128	826	...	...	2,128	826	1923
1924	4,478	300	3,000	...	7,478	300	1924
1925	6,120	1,672	6,564	4,320	12,684	5,992	1925
1926	14,457	1,416	...	...	14,457	1,416	1926
1927	16,081	830	8,787	...	24,868	830	1927
1928	17,560	3,264	7,475	2,884	25,035	6,148	1928
1929	15,944	2,630	7,005	2,612	22,949	7,242	1929
1930	10,783	1,724	1,792	2,414	12,575	6,138	1930
1931	757	2,156	...	3,442	757	5,598	1931
1932	361	1,614	...	1,714	361	4,328	1932
1933	1,020	976	...	1,314	1,020	2,290	1933
1934	8,098	3,302	...	1,150	8,098	4,452	1934
1935	5,495	2,060	5,068	2,270	10,563	4,330	1935
1936	4,131	2,004	15,124	5,178	19,255	7,182	1936
1937	3,380	1,084	4,677	1,684	8,057	2,768	1937
1938	3,194	1,186	7,655	4,102	10,849	5,288	1938
1939	8,472	2,963	9,193	3,772	17,665	6,735	1939
1940	6,234	4,453	12,187	3,756	18,421	8,209	1940
1941	4,269	3,470	...	100	4,269	3,570	1941
1942	7,713	5,137	20,058	4,887	27,770	10,021	1942
1943	2,249	3,901	11,516	6,252	13,765	10,153	1943
1944	3,806	4,556	12,854	4,171	16,660	8,727	1944
1945	1,810	4,265	...	536	1,810	4,801	1945
1946	9,629	6,589	...	...	9,629	6,589	1946
1947	17,892	7,860	...	...	17,892	7,860	1947
1948	10,537	4,403	828	199	11,365	4,602	1948
1949	13,458	5,826	...	...	13,458	5,826	1949
1950	10,107	5,554	...	...	10,107	5,554	1950
1951	8,990	5,051	1,078	2,104	10,068	7,155	1951
1952	6,405	3,993	1,375	881	7,780	4,874	1952
1953	3,722	3,700	3,831	598	7,553	4,298	1953

CLAMS

Limited by quota in Alaska and Washington on razor clams, and by the pressure of East Coast competition and that deriving from Japanese imports, Pacific clam canners in 1953 were fortunate to do a little better than maintain their position—largely as result of a modest advance in Washington canning.

CLAM CANNING in the Pacific Northwest—Washington, Oregon, British Columbia and Alaska—gained slightly in volume in 1953, and that in the face of very heavy competition from Atlantic Coast goods and foreign imports.

This was to a large extent due to the fact that the Washington and Oregon crab business has fallen upon unhappy times, with the crab population in a low-cycle and, in consequence, the demand for razor clams for crab bait negligible.

In times when crab fishing is active out of Washington ports, crabbers are willing to bid far more for razor claims to use for bait than canners can afford to pay for them for packing as human food.

When crabbing is crippled, the bait demand falls and the Washington canners get the razor clam dig, which produced about 15,000 cases—more than a quarter—of the American production of this delicacy.

Cordova Is Clam Center

In Alaska the enterprises which sought to pack razor clams on Cook Inlet and Kodiak Island thought better of it in 1953, and there were no operations outside those of the Copper River Flats, with canning centering at Cordova. Thus the Alaskan production was limited by the Copper River quota, and consequently kept close to that area's regulatory pack limit.

The Alaska razor clam pack, incidentally, was decidedly better than in 1952, when a big run of salmon to the Copper River turned attention from the clam beaches. It was, however, materially short of the preceding years, when the more optimistic operators took a chance with the high-cost conditions prevailing to Westward.

Hardshell Competition Severe

Pacific hardshell clam canning even more than razor clam packing comes face-to-face with foreign and Eastern competition in its ruggedest forms, and of recent years necessarily has been limited in large degree to relatively restricted West Coast markets, which to some degree prefer their own kind of canned clams.

1953-PACIFIC CANNED CLAM PACK-1953

		RAZOR CLAMS				
Company	Cannery Location	1-lb. Talls, 48s.	No.1 E.O., 48s.	½-lb.Flats, 48s.	No.10, 6s.	TOTAL CASES
Alaska						
Aurora Packing Co.	Cordova	...	...	500	...	500
Big Point Seafood Co.	Cordova	...	...	400	...	400
Buck Canning Co.	Cordova	20	...	...	37	57
Halferty Canneries, Inc.	Cordova	...	...	37,415	...	37,415
TOTAL ALASKA		20	...	38,315	37	38,372
Washington						
Halferty Canneries, Inc.	Seattle	...	...	3,058	...	3,058
G. P. Halferty & Co.	Aberdeen	...	...	4,620	...	4,620
Mohawk Packing Co.	Moclips	...	...	2,506	...	2,506
Pioneer Canneries, Inc.	Aberdeen	...	...	2,846	...	2,846
Plumb & Edney	Copalis Beach	...	...	1,903	...	1,903
TOTAL WASHINGTON		...	...	14,933	...	14,933
TOTAL AMERICAN RAZOR CLAMS		20	...	53,248	37	53,305
British Columbia						
Massett Cooperative Assn.	Massett	...	...	5,183	...	5,183
GRAND TOTAL RAZOR CLAMS		20	...	58,431	37	58,488
		HARDSHELL CLAMS				
Bugge Canning Co. *	Seattle	680**	90	272	529	1,571
Aurora Packing Co.	Cordova	...	...	100	...	100
Guilford Packing Co. #	Port Townsend	1,195	...	5,163	353	6,711
Haines Oyster Co. ***	Seattle	500	...	...	...	500
Iwerson Canning Co. ****	Point Roberts	301	1,567	2,307	224	4,399
Tulloch Fisheries, Ltd.	Vancouver, B. C.	2,283	...	...	...	2,283
Miscellaneous-British Columbia		...	...	20,534	...	20,534
TOTAL HARDSHELL CLAMS		4,959	1,657	28,376	1,106	36,098

**Includes 120 cases packed in glass jars.

****Also packed 1,386 cases No. 10 clam nectar, 130 cases 10-oz. clam nectar, 125 cases No. 10 in shell.

#Also packed 50 cases 1-lb. clam nectar, 1,434 ½-lb. clam nectar, 2,049 cases No. 10 clam nectar, 78 cases clam chowder, 516 cases 1-lb. in shell.

***Also packed 200 cases clam nectar.

*Also packed 570 cases clam nectar in bottles and 990 cases clam nectar in tin.

PACIFIC CLAM PACK IN PREVIOUS YEARS

(Basis 48 halves per cases)

RAZOR CLAMS

Year	Alaska	Wash. & Oregon	B.C.	TOTAL
1929	28,270	63,526	13,050	104,846
1930	33,937	54,746	12,623	100,324
1931	43,460	53,412	8,658	105,440
1932	69,147	46,002	8,457	123,606
1933	38,213	38,772	....	76,985
1934	31,655	30,232	....	61,656
1935	34,864	53,057	....	87,921
1936	29,900	49,692	....	79,592
1937	29,044	20,373	....	49,417
1938	42,305	64,167	....	106,472
1939	35,258	60,205	....	95,463
1940	41,556	51,705	....	93,261
1941	22,736	27,629	....	50,365
1942	46,703	3,999	5,568	56,270
1943	48,692	1,732	5,821	56,275
1944	47,050	3,512	**	50,562
1945	43,476	38,152	**	81,628
1946	51,594	51,063	**	102,657
1947	24,726	42,970	....	67,696
1948	34,425	11,720	....	46,145
1949	42,103	4,482	923	47,518
1950	54,534	849	1,583	56,966
1951	44,082	11,014	3,196	58,292
1952	25,960	9,843	***	35,803
1953	38,372	14,933	5,183	58,488

(Basis 48 halves per case)

HARD SHELL CLAMS

Year	Alaska	Wash.	*B.C.	TOTAL
1929	....	19,514	21,547	41,061
1930	600	27,735	18,738	46,073
1931	2,600	19,516	18,043	40,159
1932	76	13,264	9,201	22,541
1933	....	22,438	20,432	45,163
1934	....	25,880	11,630	37,510
1935	....	37,249	20,418	57,667
1936	....	45,222	25,158	70,380
1937	....	45,788	25,174	70,962
1938	....	40,007	44,310	84,317
1939	....	39,165	10,862	50,027
1940	....	35,250	7,151	42,402
1941	....	22,380	6,772	29,152
1942	....	10,972	12,240	23,212
1943	2,457	2,902	11,642	†34,001
1944	11,630	19,863	**	†71,024
1945	6,029	11,752	4,693	22,474
1946	14,441	20,574	23,867	98,826
1947	323	15,301	**	15,624
1948	92	12,600	....	12,692
1949	125	16,449	9,794 ½	26,368 ½
1950	....	8,919	8,456	17,375
1951	15	13,981	15,460	29,456
1952	179	13,544††	24,592	38,315
1953	...	13,281	22,817	36,098

† Total includes clams canned in California from clam meats produced in Mexico, 1700 cases in 1943, 39,531 cases in 1944, and 225,299 cases in 1945, and 39,944 cases canned in California in 1946.

†† Includes a small amount canned in California.

* British Columbia figures for years 1932 to 1947 and 1951, 1952 and 1953 include some razor clams.

** British Columbia totals not available.

***Included with Hardshell.

The total, some 15,500 cases, was well below the production average of recent years.

British Columbia's hardshell clam canners are not burdened by some of the restrictive regulations imposed upon Puget Sound and Alaska packers of clams of this type, and consequently were able in 1953 to maintain the substantial volume of business which characterizes their normal operations in this field.

Another factor in sustaining their volume is the greater availability and accessibility of hardshell clams on the Canadian coast. As a matter of fact, a very large proportion of the hardshell clam canning on Puget Sound is based on clams imported in the shell from the British Columbia beaches.

A New addition — Pacific Pearl

NOODLES AND SALMON DINNER!

Also Pacific Pearl

CRAB, SALMON, CLAMS
TUNA and OYSTERS

Ivar Wendt

Exclusive Sales Agents

701 CENTRAL BUILDING
SEATTLE 4, WASHINGTON
Telephone ELiot 1272 • Teletype SE-573

PACIFIC PEARL
Fancy CRAB MEAT

ROBERT L. STIX, INC.

representing

LEADING FOREIGN AND DOMESTIC PACKERS

Specialists In

Canned and Frozen
Fish and Seafood

Call us for our offerings or market information

Teletype: NY 1-625 Telephone: WOrth 2-7527
260 West Broadway, New York 13
Cable Address: "Fishstix"

We Catch, Pack and Sell Our Own Products

OCEANIC FISHERIES COMPANY, INC.

1844 Westlake North
SEATTLE 9, WASHINGTON

Packers of Alaska Sea Foods

- Herring Oil
- Herring Meal
- Condensed Fish Solubles

ALASKA HERRING
CANNED SALMON

Alaska Plants:
PORT VITA Kodiak
PORT CONCLUSION Southeast Alaska
PORT OCEANIC Prince William Sound

ALASKAN GLACIER SEA FOOD CO.

Producers of

ALASKA
COLD PACK SHRIMP
CANNED CRAB MEAT

PETERSBURG, ALASKA
P. O. BOX 1001, SEATTLE 11

PLANTINGS OF IMPORTED PACIFIC OYSTER SEED

YEAR	WASHINGTON				OREGON			California	British Columbia	TOTAL	Year
	Willapa Harbor	Grays Harbor	North Puget Sound	South Puget Sound	Coos Bay	Yaquina and Alsea	Tillamook				
1947	22,933	5,230	6,025	4,117	8,200	...	7,157	750	(a)2,292	56,704	1947
1948	14,685	1,150	5,562	1,962	3,400	1,550	1,005	850	2,675	32,839	1948
1949	17,357	7,425	6,429	4,748	290	1,930	2,500	350	4,844	45,873	1949
1950	16,512	1,550	6,830	5,745	4,425	1,300	3,575	565	5,204	45,706	1950
1951	18,569	2,250	8,685	7,119	6,749	1,500	1,274	350	(b)5,404	51,900	1951
1952	40,526	.....	15,335	7,954	455	.....	5,625	250	(c) 3,584	73,729	1952
1953	31,669	4,900	22,583	(d)	.....	.....	(e) 8,810	250	1,435	69,647	1953

(a) Includes 100 cases planted in Alaska. (b) Includes 4 cases planted in Alaska. (c) Includes 7 cases planted in Alaska. (d) Included with North Puget Sound. (e) Includes all Oregon Coast points.

1953 - Pacific Canned Shad Pack - 1953

Company	Cannery Location	Shad 48 1-lb.	Shad Roe 48 ½-lb.
Barbey Packing Co.	Astoria	173	1,269
Columbia River Packers Assn.	Astoria	2,386	1,178
Point Adams Packing Co.	Hammond, Ore.	667	971
Union Fishermen's Co-Op Pkg. Co.	Astoria	496	282
Total Pacific Northwest		3,722	3,700
CALIFORNIA			
Bell Smoked Fish Co.	San Francisco	...	250
Hickmott Canning Co.	Antioch	3,831	348
Total California		3,831	598
Total Pacific Coast		7,553	4,298

DRESSEL-COLLINS FISH CO.

Wholesale Dealers

FRESH, FROZEN, SALT,
SMOKED, KIPPERED
and CANNED FISH
OYSTERS — CRABS — CLAMS

Pier 67 — SEATTLE 1
Phone: MAin 3181

PETERSBURG Cold Storage Co., Inc.

PETERSBURG, ALASKA
Ralph Hall, Manager

Commercial FREEZING and STORAGE

Excellent Facilities for Buyers and Fishing Boats

BAIT ICE

Willapoint REG. U.S. PAT. OFF.

OYSTER STEW

Lunch, Dinner, Snack Time.. Old Fashion Oyster Stew. Heat and Serve.

Willapoint
OYSTER STEW

OYSTERS of Distinction SMOKED

Wiegardt's
SMOKED OYSTERS

Grown and Packed by
WIEGARDT BROTHERS
Ocean Park, Washington

GRANDY BOAT COMPANY

MARINE WAYS
BUILDERS OF
ALL TYPES OF FISHING VESSELS
REPAIRS and ALTERATIONS

2538 Westlake Ave. North Seattle 9, Wash.

PACIFIC FISHERMAN

. . . the basic magazine
on any commercial fishing
advertising schedule

For Rates write PF, 71 Columbia St., Seattle 4

DOUBLE-SEAL PISTON RINGS ALL SIZES
MATHERS ENGINE CONTROLS A MODEL FOR EVERY JOB
MATHERS SUPPLY CO.
4826 EAST 43d · PLAZA 8999 SEATTLE 5, WASHINGTON

EDWIN MONK

Naval Architect

Marina Mart, 1500 Westlake North
SEATTLE 9, WASH. GArfield 7907

VANCOUVER, B. C.

WESTERN FISHING CO. LTD.

WHOLESALE FISH DEALERS

Ft. Campbell Ave. Phone HA. 4360

DOC FREEMAN'S

Marine Engines Equipment Hardware

Rebuilt Chrysler Engines—6 & 8 cylinder models — $550.00 to $775.00. New 60-hp Chris-Craft engines—Model B—with reverse gear in original crates—$525.00.

999 Northlake Ave. EV 1500 Seattle

American Hammered Piston Rings

Briggs Oil Filters
Lathrop Marine Engines

H. G. McLaughlin Co., Inc.
76 YESLER WAY SEATTLE 4

OYSTERS

Rocketing rise of Oyster Stew was the outstanding feature of Pacific Northwest oyster-canning in 1953, this product achieving virtual parity, volume-wise, with canned oysters, whose production necessarily declined with the growing popularity of the new commodity.

OYSTER CANNING took a new tack in the Pacific Northwest in 1953, making a very broad advance in the output of oyster stew, which necessarily resulted in some curtailment in the volume of canned oysters packed.

Surprisingly, the case output of each product was almost the same—although of course canned oysters account for much larger total volume of oysters in the can for each case of the product.

The 1953 pack of oyster stew reached the rather remarkable total of 78,500 cases, while canned oysters fell barely short of 80,000 cases.

Oyster Stew Clicks With Market at Last

The new trend was particularly interesting to the older operators in the Pacific oyster business, who recalled clearly that in the early 'Thirties a determined effort was made to market Pacific oyster stew, but that the article—high-class though it was—failed to catch hold in the desperate conditions which ruled food marketing during the depression.

The oyster stew being packed from Pacific oysters is finding wide popularity on the Pacific Coast, and close observers believe that coming seasons will see production multiplied many times.

The product immediately proved popular in lunch counters and short-order eating places, as well as in grocery stores.

Besides their pack of oyster stew, which they were among the first to produce, Wiegardt Bros. canned a quantity of oyster stew concentrate, bite-size oysters with seasoning, butter and monosodium glutamate, in quarter-pound flat cans—leaving it to the consumer to add milk or cream just prior to serving.

The most notable development in oyster marketing in 1953 was the announcement by Ward Kumm, president of Coast Oyster Co. and Willapoint Oysters, Inc., that these firms had entered into a contract with the Van Camp Sea Food Co., one of the largest American packers and merchandisers of fish and sea food, to handle the distribution of its "Willapoint" brand canned oysters and oyster stew.

Steady rise of the "buffet" tin—7¾-oz.—in the Pacific oyster canning business was again evidenced in 1953, when more than half the canned oysters and about one-third of the oyster stew was packed in this container.

The rise of oyster stew, which generally employs monosodium glutamate as an ingredient, lent important support to the use of this flavor-emphasizing additive, which is finding wider and wider employment as the packing of ready-to-heat food products grows in Pacific fish and seafood packing.

PACIFIC CANNED OYSTERS
Season of 1952-53

COMPANY	CANNERY LOCATION	(Cases 48)				
		No.1 E.O. 10 oz	Buffet 7¾ oz.*	No.1 Tall	Total Cases as they run.	Total Standard Cases, Basis 48 No.1 E.O.
Bendiksen Co., E. H.	South Bend, Wash.	4,031	21,453	...	25,484	20,639
Coast Oyster Co.	South Bend, Wash.	26,059	22,723	3,012	51,794	48,488
Guilford Packing Co.	Port Townsend, Wash.	66	206	...	272	166
Tulloch Fisheries	Vancouver, B. C.	585	...	...	585	585
Union Fishermen's Cooperative Pkg. Co.	Astoria, Ore.	1,327	...	...	1,327	1,327
Wiegardt Brothers	Ocean Park, Wash.	5,676	3,913	...	9,589	8,709
TOTALS		37,744	48,295	3,012	89,051	79,914

- .PACIFIC CANNED OYSTERS, equivalent of standard cases of 48 No. 1 E. O. packed in --

1952	99,041	1946	89,050				
1951	132,140	1945	3,184	1940	148,870	1935	88,062
1950	120,742	1944	none	1939	112,549	1934	68,323
1949	113,989	1943	583	1938	111,348	1933	32,315
1948	83,489	1942	72,315	1937	110,872	1932	12,233
1947	57,205	1941	178,445	1936	118,853	1931	7,930

NOTE: — Figures for current production cover 1952-53 oyster season. Historical figures are for calendar years and have been corrected from official sources.

* Also packed 980 cases Oyster Soup and 521 cases Smoked Oysters.

**Packed 2,000 cases Oyster Soup, not included in totals.

PACIFIC CANNED OYSTER STEW

SEASON OF 1952-1953

Company	Cannery Location	Cases of 48			
		No. 1 E. O. 10 oz.	Buffet 7¾ oz.	Cases as they run	Total Standard Cases, basis 48 No. 1 E. O.
Coast Oyster Co	South Bend, Washington	27,325	26,518	53,843	47,876
Northern Oyster Co.	Oysterville, Washington	300	...	300	300
Wiegardt Bros.	Ocean Park, Washington	2,606	28	2,634	2,628
Willapa Bay Oyster Co.	South Bend, Washington	18,200	12,300	30,500	27,732
Total		48,431	38,846	87,277	78,536

MARDEN & HAGIST
SHIP CHANDLERS
MARINE & INDUSTRIAL SUPPLIES
MARDEN & HAGIST
SHIP CHANDLERS

FISHERMEN'S HEADQUARTERS—
FOR OREGON and the COLUMBIA RIVER

QUALITY

SATISFACTION

Distributors:

STARR NETS

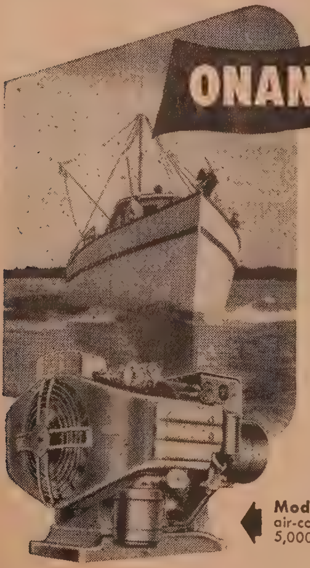
STARR "STARLOCK" NYLON NETTING ● COTTON ROPE and SEINE TWINE
WIRE ROPE ● TUBBS MANILA ROPE ● NYLON and SARAN ROPE

ANOTHER SPONGEX PRODUCT

SPONGEX PLASTIC FISHING FLOATS

CANNERY SUPPLIES
PABCO MARINE PAINTS
HOBBS MARINE BATTERIES
SCOTT ATWATER OUTBOARD MOTORS
CAMPING & FISHING SUPPLIES

MARDEN & HAGIST
MARINE and INDUSTRIAL SUPPLIES
1705 N. W. 14TH AVENUE, PORTLAND 9, OREGON PHONE AT. 6666
Coos Bay, Oregon, Branch—Phone Skyline 9-4912
DAY OR NIGHT SERVICE Call John Sipila WE 2868 or Dick Sindelar FI 6973



ONAN Electric Plants

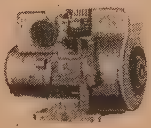
for dependable Light and Power on fishing craft

..There's an Onan Electric Plant the right size and type for craft of every size and purpose . . . shrimpers, trawlers, tugs, workboats of all kinds. They speed work aboard and save time by permitting use of electrical equipment such as bilge pumps, compressors, radios, pressure-water systems and floodlights. Smooth-running and dependable; compact and easy to install. Standard equipment on many new craft. 400 to 10,000 watts, air cooled, A.C., battery charging and dual-purpose units.

Model 5DRP—Two-cylinder, air-cooled Diesel engine. 5,000 watts A.C.

A Model to Fit Your Craft

Model 3DSP 3,000 watts A.C. One-cylinder Diesel.



Model AH 400 to 1,000 watts. One-cyl. gasoline.

Separate Generators 1½ to 60KW

AUTHORIZED DISTRIBUTORS
(Wash. & Alaska), **FREMONT ELECTRIC COMPANY,** 744 North 34th Seattle. (Oregon), **SPARKS & WILLS CO.,** 1624 S.E. Grand Ave., Portland, Oregon. (California & Nevada), **ETS-HOKIN & GALVAN,** 551 Mission St., San Francisco, Calif.; 218 N. Avalon Bldg., Wilmington, Calif.

Onan ELECTRIC PLANTS

LIPSETT

. . . a name you
can depend on
for all your
Fishing needs

Est. 1891

EDWARD LIPSETT LTD.
Vancouver Victoria Prince Rupert

CONSERVATION

Conservation and research go hand-in-hand as man seeks how to use fishery resources without impairing them — How to harvest the surplus while providing seed for the morrow — How much seed is needed? — What kind? — And where?

Conservation without research gropes blindly, and often fails of the goal it seeks — wise use, with sustained yield.

In 1953 there was impressive proof of this point: that effective conservation comes from applied research.

ACHIEVEMENT of 1953 in the broad field of fishery conservation and research centered largely in British Columbia, where benefits on three distinct fronts demonstrated the potentialities of conservation which **applies** the products of sound research.

There were three such fronts, related in a way, but essentially distinct:

1. The Fraser River Sockeye achievement.
2. The excellent salmon runs of the British Columbia coast as a whole.
3. The rehabilitation of the Babine River Sockeye population after

Fraser River-Puget Sound Sockeye Pack, by Cycles

British Columbia	1895—	395,984	1896—	356,984	1897—	860,459	1898—	256,101	British Columbia
Washington		65,143		72,979		312,048		252,000	Washington
TOTAL		461,127		429,963		1,172,507		508,101	TOTAL
British Columbia	1899—	480,485	1900—	229,800	1901—	928,669	1902—	293,477	British Columbia
Washington		499,646		228,704		1,105,096		339,556	Washington
TOTAL		980,131		458,504		2,033,765		633,033	TOTAL
British Columbia	1903—	204,809	1904—	72,688	1905—	837,489	1906—	183,007	British Columbia
Washington		167,211		123,419		837,122		182,241	Washington
TOTAL		372,020		196,107		1,674,611		365,248	TOTAL
British Columbia	1907—	59,815	1908—	74,574	1909—	585,435	1910—	150,432	British Columbia
Washington		96,974		170,951		1,097,904		248,014	Washington
TOTAL		156,789		245,525		1,683,339		398,446	TOTAL
British Columbia	1911—	58,487	1912—	123,879	1913—	719,796	1914—	198,183	British Columbia
Washington		127,761		184,680		1,673,099		335,230	Washington
TOTAL		186,248		308,559		2,392,895		533,413	TOTAL
British Columbia	1915—	91,130	1916—	32,146	1917—	148,164	1918—	19,697	British Columbia
Washington		64,584		84,637		411,538		50,723	Washington
TOTAL		155,714		116,783		559,702		70,420	TOTAL
British Columbia	1919—	38,854	1920—	48,399	1921—	39,631	1922—	51,832	British Columbia
Washington		64,346		62,654		102,967		48,566	Washington
TOTAL		103,200		111,053		142,598		100,398	TOTAL
British Columbia	1923—	31,655	1924—	39,743	1925—	35,385	1926—	85,689	British Columbia
Washington		47,402		69,369		112,023		44,673	Washington
TOTAL		79,057		109,112		147,408		130,362	TOTAL
British Columbia	1927—	61,393	1928—	29,299	1929—	61,569	1930—	103,692	British Columbia
Washington		97,594		61,044		111,898		352,194	Washington
TOTAL		158,987		90,343		173,467		455,886	TOTAL
British Columbia	1931—	40,947	1932—	65,769	1933—	52,465	1934—	139,238	British Columbia
Washington		87,211		81,188		126,604		352,579	Washington
TOTAL		128,158		146,957		179,069		491,817	TOTAL
British Columbia	1935—	62,822	1936—	184,854	1937—	100,272	1938—	186,794	British Columbia
Washington		54,677		59,505		60,259		134,641	Washington
TOTAL		117,499		244,359		160,531		321,435	TOTAL
British Columbia	1939—	54,296	1940—	99,009	1941—	171,290	1942—	446,371	British Columbia
Washington		43,511		59,354		110,605		263,458	Washington
TOTAL		97,807		158,363		281,895		709,829	TOTAL
British Columbia	1943—	31,973½	1944—	88,515	1945—	79,781½	1946—	331,292	British Columbia
Washington		19,179		37,509		53,054½		280,018	Washington
TOTAL		51,152½		126,024		132,836		611,310	TOTAL
British Columbia	1947—	27,857	1948—	61,650	1949—	80,629	1950—	81,510	British Columbia
Washington		7,516		90,441		80,547		116,458	Washington
TOTAL		35,373		152,091		161,176		197,968	TOTAL
British Columbia	1951	134,400	1952	115,814	1953*	175,000			British Columbia
Washington		118,151		114,638		178,000			Washington
TOTAL		252,551		230,452		353,000			TOTAL

*Figures for 1953 are approximate.
Statistics represent 48-lb. cases of Sockeyes caught in the Fraser River district of British Columbia and adjacent waters of the state of Washington, whether canned in those districts or elsewhere — and not including other Sockeye canned in those districts. This accounts in large part for the discrepancy between these statistics and those appearing elsewhere in this issue.

the canyon of that stream had been blocked by a rock slide.

Before returning to discussion of the Canadian achievements, look at other fishery research highlights of 1953, ranged from Bering Sea to the Equator and beyond:

1. **Pacific Oceanic Fishery Investigations,** U.S. Federal enterprise based on Hawaii, finding and confirming a rich sub-surface population of large tuna inhabitating a broad band along the Equator across much of the Pacific — and thus stimulated both American and Japanese operators to set long-line gear in these vast and virgin waters. Tests sponsored by the same agency, seeking to develop artificial attractants for tuna, produced interesting experimental results; which nevertheless failed to prove effective when tried at sea.

2. **Inter-American Tropical Tuna Commission,** continuing its careful, basic studies of the tropical tunas—studies which are in fact the foundation research on this great resource, and thus must be particularly broad and fully founded—turned as well to scientifically controlled applied biology and sponsored a transplant of "anchovettas"— bait fish for tuna —from Panama to Costa Rican waters, where once-abundant schools of this species were wiped out to a fish some years ago by a "red tide."

3. **California Sardine Investigations,** five-sided program, perhaps the most extensive and concentrated single fishery research project currently active in the world, sought assiduously in 1953 for the secrets and solution of the commercial disappearance of what was once America's most abundant fish, and was obliged to report that it could find in the evidence of spawning no indication that rehabilitation was near.

California also successfully tagged —and recovered—tuna for the first time in biological research; and one of its tagged Albacore actually was recovered by fishermen off the coast of Japan approximately a year after being marked—thus providing the first direct evidence of transpacific migration by a species of tuna.

4. **Fisheries Research Institute,** believed to be the only privately-sponsored fishery research in the world, the only scientific studies of the fishery resource supported directly by the industry dependent upon the resource rather than by public funds, continued its intensive studies in five areas of Alaska, with particular emphasis upon advanced methods of enumerating spawning escapements and the resulting seaward migration. Through this agency elements of the salmon industry sponsor basic fishery research in the public interest.

Returning now to British Columbia:

The Fraser River Sockeye achievement of 1953 of course is not Canadian alone, although the locale was in Canada. It is the result of joint work of the United States and Canada, operating through international treaty to restore the Sockeye fishery of the Fraser River — which both countries share.

Despite the largest catch made from the 1953 cycle in many years, the escapement to the spawning grounds showed highly gratifying gains over previous cycle years— gains of as much as 20 to 1. Briefly, much of the current achievement comes from identifying the several races as they pass through the fishery, and in affording protection to the races which need it, while making the catch from those races whose return is marked by surplus.

Success of Canada in maintaining — and increasing — its salmon runs while those of Southeast Alaska have been going down and down was particularly marked in 1953. British Columbia in that year had one of the best salmon packs in its history, while Southeast Alaska had one of the worst. True, fishing in the northern part of British Columbia was not as good as that in the south—nor was that in Icy Strait as good as that around Ketchikan — but the Canadian catch as a whole was high and the fishery healthy, while that of adjacent Alaska was poor to the point of failure.

MILD CURED SALMON
CANNED SALMON

ICI-FRESH
BRAND
TRADE MARK
CB
PACKED IN THE NORTH PACIFIC
Frozen
SALMON
AND
HALIBUT
OXENBERG BROS., INC. • BROOKLYN, N. Y. • SEATTLE, WASH.

FRESH SALMON
FISH FILLETS

OXENBERG BROS., INC.
276-280 Metropolitan Ave., Brooklyn, N. Y.
Bell Street Terminal, Seattle 1, Wash.

BUNZEN & DAVIS
FISHERY PRODUCTS

SALTED ALASKA SALMON
ALASKA HERRING and COD
MILDCURED SALMON
FROZEN and SMOKED FISH

Pier 66
Seattle 1, U.S.A.

STOP
ROT
CUPROLIGNUM

CONTINUALLY ON GUARD

CUPROLIGNUM prevents rot in nets, boat timbers, ropes, etc. By treating your net and equipment with CUPROLIGNUM, you prevent rot. CUPROLIGNUM has been used with outstanding success in the fishing industry for many years. Use CUPROLIGNUM — make SURE your net will hold!

CUPROLIGNUM
BUDD & CUMMINGS
1608 - 15th Ave. W.
Seattle 99

WHAT DID WE HIT?

If a plank let go or you struck a submerged object, could you keep YOUR boat afloat?

MP bilge pumps are designed specifically for the rugged job of keeping boats afloat—protecting not just property, but human life. Protection from the sea for 4,000,000 G.I.s in two wars.

1. All bronze construction.
2. Runs continuously—wet or dry.
3. Pumps its weight in water every second.
4. 27 models to choose from.
5. Capacities to 280 gallons per minute—over 16,000 gallons per hour.

Ask your local yard or dealer for more details. From $39.00

MARINE PRODUCTS COMPANY
[illegible] LYCASTE AVENUE
DETROIT 14 MICHIGAN

HALIBUT

Productivity of a sort not known for decades, developing unheralded in southern Hecate Strait during the 1952 halibut season, made it the most astonishing, and one of the most rewarding, in the modern history of this first internationally-regulated fishery.

EXTRAORDINARY abundance of halibut in Area 2, resulting in productivity comparable with that of 40 years ago, was the outstanding feature of the 1953 halibut season.

Indeed, it was the outstanding feature of the halibut fishery for **many** seasons; and was as unexpected as it was spectacular. Moreover, the factors which produced the heavy concentration of halibut in the Central Hecate Strait and Goose Island grounds were not well understood even by the staff of the International Pacific Halibut Commission as 1954 opened.

Although the phenomenal abundance was evident from the first day of the first trip, it increased as the 24 days of the season progressed. In other words, in Hecate Strait in 1952 the usual drawn-down of the stock under the pressure of the fishery was reversed. The second trips found

1953– PACIFIC HALIBUT CATCH-AREAS 2 and 3 by Months

MONTH	Pounds								
	AREA 2*			AREA 3*			TOTAL		
	U. S.	Canada	Total	U. S.	Canada	Total	U. S.	Canada	Total
May	5,477,000	8,457,000	13,923,000	1,636,000	600,000	2,236,000	7,102,000	9,057,000	16,159,000
June	6,734,000	7,584,000	14,318,000	10,041,000	3,300,000	13,341,000	16,775,000	10,884,000	27,659,000
July	184,000	51,000	235,000	6,885,000	3,435,000	10,320,000	7,069,000	3,486,000	10,555,000
August	1,732,000	2,045,000	3,777,000	378,000	...	378,000	2,110,000	2,045,000	4,155,000
September	169,000	69,000	238,000	425,000	221,000	646,000	594,000	290,000	884,000
October	109,000	7,000	116,000	...	...	...	109,000	7,000	116,000
November	37,000	2,000	39,000	...	...	...	37,000	2,000	39,000
Total	14,431,000	18,215,000	32,646,000	19,365,000	7,556,000	26,921,000	33,796,000	25,771,000	59,567,000

This total includes 603,000 lbs. of halibut which were taken incidentally to cod fishing in Area 2 and 13,000 in Area 3, as allowed by the 1953 Regulations of the International Pacific Halibut Commission.
This table does not include the partially estimated amount of 381,000 lbs. landed from Areas 1A and 1B.
*Area 2 comprises the present Areas 2A, 2B and 2C, and Area 3 the present 3A, 3B and 4.
NOTE: 1953 figures of the International Pacific Halibut Commission are preliminary and subject to further correction.

Pacific Halibut Catch by Areas and Nationalities

YEAR	Pounds										YEAR
	AREA 1	AREA 2†			AREA 3†			TOTAL American	TOTAL Canadian	GRAND TOTAL	
	American	American	Canadian	Total	American	Canadian	Total				
1932	902,271	16,026,631	5,960,640	21,987,271	21,146,037	451,761	21,597,798	38,074,939	6,412,401	44,487,340	1932
1933	722,254	14,880,259	7,649,400	22,529,659	22,887,941	637,672	23,525,013	38,490,454	8,286,472	46,776,926	1933
1934	1,541,258	13,360,103	9,004,714	22,364,817	22,829,989	726,658	23,556,648	37,731,350	9,731,372	47,462,722	1934
1935	*1,489,294	13,112,709	8,954,740	22,067,449	22,532,977	1,251,314	23,784,291	37,134,980	10,206,054	47,341,034	1935
1936	708,301	13,865,731	8,696,865	22,562,596	23,717,665	1,887,788	25,605,453	38,291,697	10,584,653	48,876,350	1936
1937	709,752	13,445,575	9,852,348	23,297,923	23,551,917	1,912,966	25,464,883	37,707,244	11,765,314	49,472,558	1937
1938	706,316	13,737,819	9,571,461	23,309,280	22,820,005	2,623,208	25,443,213	37,264,140	12,194,669	49,458,809	1938
1939	1,072,675	13,466,002	10,913,035	24,379,037	22,761,120	2,552,125	25,313,245	37,299,797	13,465,160	50,764,957	1939
1940	779,036	14,395,547	11,101,558	25,497,105	25,396,243	1,582,314	26,978,557	40,570,826	12,683,872	53,254,698	1940
1941	332,259	13,332,247	10,609,166	23,941,413	25,590,281	2,350,333	27,940,614	39,254,787	12,959,499	52,214,286	1941
1942	285,621	14,046,982	9,147,146	23,194,128	24,903,636	2,054,745	26,958,381	39,236,239	11,201,891	50,438,130	1942
1943	419,944	13,740,543	11,116,583	24,857,126	26,569,949	1,790,540	28,360,489	40,730,436	12,907,123	53,637,559	1943
1944	318,689	14,957,704	11,149,714	26,107,418	24,782,581	2,190,459	26,973,040	40,058,974	13,340,173	53,399,147	1944
1945	529,000	13,230,000	11,750,000	24,980,000	25,605,000	3,551,000	29,156,000	39,364,000	15,301,000	54,665,000	1945
1946	605,000	14,068,000	14,451,000	28,519,000	27,067,000	4,058,000	31,125,000	41,740,000	18,509,000	60,249,000	1946
1947	406,000	10,387,000	17,175,000	27,562,000	20,869,000	7,081,000	27,950,000	31,662,000	24,256,000	55,918,000	1947
1948	283,000	13,273,000	14,203,000	27,476,000	23,276,000	4,453,000	27,729,000	36,832,000	18,656,000	55,488,000	1948
1949	426,000	12,461,000	13,588,000	26,049,000	23,433,000	5,158,000	28,591,000	36,320,000	18,746,000	55,066,000	1949
1950	335,000	12,594,000	14,115,000	26,709,000	25,413,000	4,769,000	30,182,000	38,399,000	18,884,000	57,283,000	1950
1951	314,000	14,426,000	16,191,000	30,617,000	20,318,000	4,829,000	25,147,000	35,058,000	21,020,000	56,078,000	1951
1952	391,000	13,355,000	17,133,000	30,488,000	23,868,000	7,586,000	31,454,000	37,614,000	24,719,000	62,333,000	1952
1953	381,000	14,431,000	18,215,000	32,646,000	19,365,000	7,556,000	26,921,000	34,177,000	25,771,000	59,948,000	1953

†Figures for Area 2 for 1937 and thereafter include halibut which were taken incidentally to cod fishing after the closure of Area 2, as allowed by regulations of the International Fisheries Commission for these years. The approximate amounts are : 278,000 lbs. in 1937; 280,000 lbs. in 1938; 372,943 lbs. in 1939; 304,155 lbs. in 1940; 510,204 lbs. in 1941; 55,895 lbs. in 1942; 856,360 lbs. in 1943; 844,596 lbs. in 1944; 920,000 lbs. in 1945; 1,184,000 lbs. in 1946; 392,997 lbs. in 1947; 898,246 lbs. in 1948; 870,138 lbs. in 1949; 319,745 lbs. in 1950; 885,000 lbs. in 1951, 461,000 lbs in 1952; and 603,000 lbs in 1953. In Area 3, 58,632 lbs in 1949; 94,000 lbs in 1951; 11,000 lbs in 1952; and 13,000 lbs. in 1953.

*This figure includes landings from Areas 1 and 4, as defined in the regulations for 1935. This amount should compare directly with the Area 1 catch of previous years, as it is not believed any fish were landed in 1935 from that portion of Area 4 which included Bering Sea.

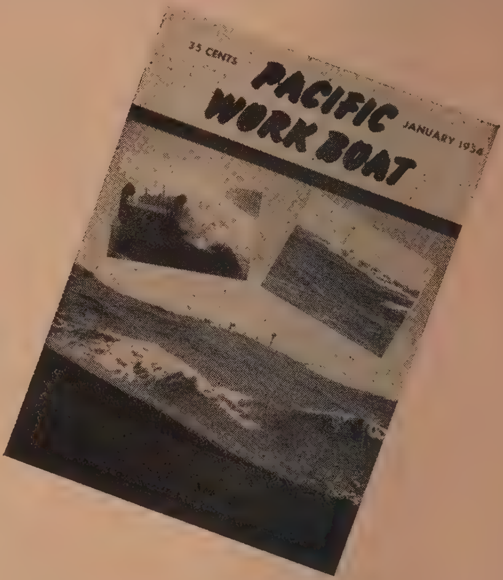
NOTE: — 1953 figures of the International Fisheries Commission are preliminary and subject to further correction. In data for 1951 and thereafter Area 1 includes the catches from Areas 1A and 1B and Area 2 include the catches from Areas 2A, 2B and 2C. In data for 1952 and thereafter Area 3 includes the catches from Areas 3A, 3B and 4.

PACIFIC WORK BOAT

Is Read in the Fishing Industry

by

- OWNERS
- OPERATORS
- SKIPPERS
- MAINTENANCE MEN
- FLEET MEN



Because...

Pacific Work Boat is the Pacific Coast magazine that carries . . .

FISHING BOAT PLANS FROM LEADING ARCHITECTS—
BOAT BUILDING IDEAS—ARTICLES OF GENERAL WORK BOAT INTEREST
IDEAS ON ENGINE AND EQUIPMENT APPLICATIONS —
NEW FISHING BOATS—EDITORIAL MATERIAL THAT IS AN INFORMATIVE,
TIMELY GUIDE TO COMMERCIAL BOAT BUILDING AND PURCHASING

PACIFIC WORK BOAT

121 Second St.
San Francisco 5, Calif.

Yes! Enter my subscription for:

☐ 1 Year $3.00 ☐ 2 Years $5.00 ☐ 3 Years $7.00

Name..

Street Address..

City..Zone.........State..........................

HALIBUT CATCH BY SUB-AREAS

	Area 2B (Lower Hecate Strait)				Area 2C (Forrester Island)				Area 3B (West of Sanak Is.)				Area 4 (Bering Sea)			
	CATCH		No. of Vessels		CATCH		No. of Vessels		CATCH		No. of Vessels		CATCH		No. of* Vessels	
	1952	1953	1952-1953		1952	1953	1952-1953		1952	1953	1952-1953		1952	1953	1952-1953	
Canada	1,456,000	1,916,000	56	54	248,000	107,000	13	2	69,000	218,000	1	3	...	...	...	...
U. S.	634,000	1,057,000	32	35	1,071,000	619,000	78	35	808,000	720,000	38	13	132,000	80,000	6	5
U.S. & Canada	2,090,000	2,973,000	88	89	1,319,000	726,000	91	37	877,000	938,000	39	16	132,000	80,000**	6	5

Areas 2B and 2C were open for 10 days fishing on July 26 in 1952 and on July 31 in 1953. Areas 3B and 4 were open for 17 days fishing on August 2 in 1952 and for 25 days fishing on August 5 in 1953. *These vessels also fished in Area 3B and are included in the fleet totals for that area.

**About 152,000 pounds of the area 3B catch was taken in the portion of that area lying north of the Aleutian Islands. This amount combined with the 80,000 catch in Area 4 gives a total catch of 232,000 pounds from Bering Sea waters compared to 253,000 pounds taken in 1952.

the grounds producing heavier than the first; and the third trips which many Canadian boats managed to pull-off were better even than the second.

More Fish in Less Time

The result of this reversal, on top of the speed and volume of the fishing, resulted in a large over-quota catch, despite the fact that the season was the shortest ever recorded. Briefly, Area 2 produced 2,158,000 lbs. more fish in 1953 than in 1952, and in two fewer days—7% more fish in 7½% less time.

The 24-day season in Area 2 was of course the shortest on record, continuing the down-trend from the so6 days which were required to catch the quota—much smaller than now—back in 1933, when quota control was begun.

Area 3 Short of Quota

Interestingly, but not significantly, the 1953 catch in Area 3 was down 4,500,000 lbs. from the year before, and was 2,385,000 lbs. short of the quota.

There is no reason to think that the shortage in Area 3 resulted from a shift of fish to Area 2; nor was it directly due to the fact that the area went far over its quota in 1952.

The commission staff may have sharpened its pencils to a fine point when it got to figuring the 1953 closure, but there was no attempt to penalize the fleet in 1953 for its over-quota catch of the year before. The prognosticators may have gone a bit far in trying to correct some of the mistakes made in their figuring the year before.

Sub-Areas Yield More

The catch from the non-quota sub-areas increased by about 300,000 lbs. in 1953, due largely to the gain of

PACIFIC HALIBUT CATCH SINCE 1914

YEAR	Pounds										YEAR
	AMERICAN VESSELS					CANADIAN VESSELS				GRAND TOTAL	
	Seattle *	Prince Rupert **	Alaska	Oregon & California ***	Total American	Pr. Rupert, Butedale, Klemtu	Vancouver, New Westm., Vancouver I.	American Ports	Total Canadian		
1914	41,825,575	1,877,000	5,175,993	...	48,878,568	8,742,100	4,991,500	...	13,733,600	62,612,168	1914
1915	33,133,313	11,323,500	5,561,577	...	50,018,390	8,444,715	4,791,000	...	13,235,715	63,254,105	1915
1916	20,259,446	13,810,895	6,961,628	...	41,031,969	6,710,500	5,258,000	...	11,968,500	53,000,469	1916
1917	22,884,434	14,216,030	6,792,138	...	43,892,602	5,839,030	3,686,000	...	9,525,030	53,417,632	1917
1918	16,455,564	10,790,500	6,076,500	...	33,322,564	4,338,000	1,552,000	...	5,890,000	39,212,564	1918
1919	16,968,639	13,000,700	7,366,991	...	37,336,330	6,120,000	1,957,000	...	8,077,000	45,413,330	1919
1920	19,692,915	14,676,400	8,035,000	...	42,404,315	7,190,000	2,010,600	...	9,200,600	51,604,915	1920
1921	17,127,783	19,531,400	8,784,029	...	45,443,212	8,906,000	4,149,400	...	13,055,400	58,498,612	1921
1922	14,602,780	17,248,900	4,772,038	...	36,623,718	8,510,000	3,559,500	...	12,069,500	48,693,218	1922
1923	12,017,312	20,366,600	8,283,590	...	40,667,502	9,392,900	3,707,200	...	13,100,100	53,767,602	1923
1924	11,889,080	20,913,200	12,663,776	...	45,466,056	8,181,500	4,043,500	...	12,225,000	57,691,056	1924
1925	11,197,474	22,434,800	9,752,465	400,000	43,784,739	6,181,600	3,207,600	...	9,389,200	53,169,939	1925
1926	10,156,630	20,483,800	14,011,005	600,000	45,252,435	6,869,200	4,156,500	...	11,025,700	56,278,135	1926
1927	11,917,150	18,664,400	15,386,766	400,000	46,818,316	6,941,000	1,523,400	...	8,464,400	55,282,716	1927
1928	13,788,775	20,389,700	9,623,700	760,000	44,562,175	8,349,500	1,541,500	...	9,891,000	54,453,175	1928
1929	12,359,170	20,599,200	12,882,426	1,103,888	46,890,984	8,045,100	1,747,800	...	9,792,900	56,683,884	1929
1930	12,671,470	16,997,800	11,389,756	930,000	41,989,832	7,006,600	1,475,200	...	8,481,800	50,471,632	1930
1931	15,087,672	10,573,300	9,638,150	953,000	36,252,122	6,202,400	1,424,800	...	7,627,200	43,879,322	1931
1932	22,000,296	10,633,800	4,568,829	1,050,000	38,253,025	4,227,700	2,023,200	...	6,250,900	44,503,925	1932
1933	22,263,992	8,757,300	6,781,451	679,066	38,461,454	5,649,200	2,630,700	...	8,300,255	46,761,709	1933
1934	20,718,328	8,591,983	7,132,059	1,288,980	37,731,350	7,946,499	1,784,873	...	9,731,372	47,462,722	1934
1935	22,388,941	6,927,014	6,538,114	1,280,911	37,134,980	7,636,694	2,563,276	...	10,206,054	47,341,034	1935
1936	22,726,642	6,204,645	8,654,364	706,646	38,291,697	8,111,472	2,468,936	...	10,584,653	48,876,350	1936
1937	21,351,684	7,017,857	8,646,993	690,710	37,707,244	9,032,623	2,711,562	...	11,765,314	49,472,558	1937
1938	20,995,966	7,324,178	8,220,752	704,734	37,264,140	8,617,890	3,384,569	192,210	12,194,669	49,458,809	1938
1939	20,070,259	9,319,026	6,897,208	1,013,304	37,299,797	9,904,372	3,466,362	94,428	13,465,162	50,764,957	1939
1940	18,863,872	11,210,740	9,481,893	1,014,321	40,570,826	9,323,133	3,355,516	5,223	12,683,872	53,254,698	1940
1941	19,095,973	10,036,640	8,998,580	1,123,594	39,254,787	8,708,902	4,173,967	76,630	12,959,499	52,214,286	1941
1942	14,865,306	13,430,294	10,169,162	771,477	39,236,239	5,997,895	5,203,996	65,680	11,201,891	50,438,130	1942
1943	13,278,341	12,309,595	14,096,356	1,046,144	40,730,436	6,281,348	6,487,010	138,765	12,907,123	53,637,559	1943
1944	11,881,680	5,444,672	21,853,111	879,511	40,058,974	8,458,974	4,823,502	59,211	13,340,173	53,399,147	1944
1945	12,651,000	4,571,000	21,049,000	1,093,000	39,364,000	11,606,000	3,503,000	192,000	15,301,000	54,665,000	1945
1946	13,932,000	4,384,000	22,502,000	928,000	41,740,000	15,117,000	2,919,000	473,000	18,509,000	60,249,000	1946
1947	5,816,000	2,585,000	22,422,000	841,000	31,664,000	17,868,000	6,117,000	270,000	24,255,000	55,919,000	1947
1948	9,941,000	2,479,000	23,790,000	621,000	36,831,000	13,665,000	4,813,000	179,000	18,657,000	55,488,000	1948
1949	10,017,000	4,205,000	21,473,000	625,000	36,320,000	13,745,000	4,318,000	683,000	18,746,000	55,066,000	1949
1950	8,663,000	3,683,000	25,265,000	788,000	38,399,000	15,237,000	3,577,000	70,000	18,884,000	57,283,000	1950
1951	11,100,000	4,389,000	19,034,000	535,000	35,058,000	15,717,000	4,742,000	561,000	21,020,000	56,078,000	1951
1952	13,152,000	3,037,000	20,862,000	563,000	37,614,000	19,275,000	4,315,000	1,129,000	24,719,000	62,333,000	1952
1953	14,553,000	1,970,000	17,035,000	619,000	34,177,000	17,924,000	6,828,000	1,019,000	25,771,000	59,948,000	1953

Note.-- 1953 figures of the International Fisheries Commission are preliminary and subject to further correction.

*Includes the very small amount of fish landed at Neah Bay and elsewhere on Puget Sound.

**Includes the fish occasionally landed by American vessels at Butedale, Vancouver and elsewhere in Canada.

***Landings in Oregon and California not segregated prior to 1925.

SAN JUAN BRAND

SAN JUAN
COPYRIGHTED

TRADE MARK

Producers of

Fresh - Frozen - Salt - Smoked - Canned

Pacific Coast Fish Products

San Juan Fishing & Packing Co.

Foot of Stacy St. **SEATTLE 4, U. S. A.**

B.C. ICE & COLD STORAGE LTD.

Canada's Most Modern Cold Storage Operation

Equipped with cold wall storage rooms which eliminate practically all dehydration of product.

Full facilities available for fish dressing and filleting, loose and packaged freezing, etc.

Daily freezing capacity — 350,000 lbs.

B. C. ICE AND COLD STORAGE, LTD.

2115 Commissioner St., Vancouver, Canada, HA. 6286

1953-HALIBUT ARRIVALS AT ALASKA PORTS - 1953

(Data in Pounds)

MONTH	Ketchikan	Wrangell	Petersburg	Sitka	Juneau	Pelican	Misc.S. E. Alaska	Central* Alaska	Total
May	559,000	161,000	1,307,000	532,000	259,000	866,000	104,000	371,000	4,159,000
June	2,134,000	131,000	1,160,000	890,000	1,163,000	1,582,000	109,000	2,392,000	9,561,000
July	2,003,000	69,000	261,000	229,000	262,000	367,000	...	453,000	3,644,000
August	94,000	...	24,000	7,000	6,000	3,000	1,000	328,000	463,000
September	24,000	...	64,000	3,000	14,000	3,000	...	8,000	116,000
October	...	...	51,000	...	2,000	3,000	...	...	56,000
November	...	...	...	...	...	3,000	...	...	3,000
Total 1953	4,814,000	361,000	2,867,000	1,661,000	1,706,000	2,827,000	214,000	3,552,000	18,002,000
Previous Years									
1952	7,696,000	430,000	3,022,000	2,023,000	2,645,000	2,244,000	139,000	2,661,000	20,860,000
1951	5,170,000	496,000	2,869,000	1,985,000	2,386,000	2,294,000	192,000	3,642,000	19,034,000
1950	6,992,000	479,000	3,140,000	3,103,000	3,823,000	3,351,000	75,000	4,372,000	25,265,000
1949	7,628,000	499,000	2,675,000	2,008,000	2,473,000	2,102,000	41,000	4,689,000	22,115,000
1948	7,700,000	716,000	2,548,000	2,990,000	2,797,000	2,362,000	114,000	4,742,000	23,969,000
1947	7,503,000	643,000	2,828,000	2,634,000	5,432,000**	...	...	3,389,000	22,429,000
1946	9,918,000	699,000	2,943,000	2,684,000	4,363,000**	...	...	2,279,000	22,886,000
1945	2,277,000	585,000	2,161,000	2,773,000	4,363,000**	...	...	2,221,000	20,887,000
1944	9,554,962	1,008,312	2,486,084	2,694,073	3,540,637	...	...	2,569,043	21,853,111
1943	7,450,730	727,157	1,936,825	1,691,697	2,289,947	...	...	...	14,096,356
1942	5,749,469	469,037	1,559,221	834,046	1,816,148	...	...	...	10,169,162
1941	3,367,567	375,135	1,463,801	2,173,697	1,616,928	...	...	...	8,998,580
1940	3,798,134	400,735	1,718,490	1,370,412	1,984,511	...	...	...	9,481,893
1939	2,263,927	279,660	1,460,190	931,557	2,001,999	...	...	...	6,897,208
1938	2,828,111	414,928	1,965,843	906,852	2,039,814	...	...	...	8,220,752
1937	3,642,996	590,834	1,352,807	893,602	1,832,533	...	...	...	8,646,993
1936	3,556,364	494,221	1,979,813	945,933	1,541,674	...	...	...	8,654,364
1935	3,752,488	112,060	474,672	667,811	1,341,864	...	...	...	6,538,114
1934	3,155,474	284,950	1,002,792	1,172,264	1,463,761	...	...	...	7,132,059

* Port Williams, Cordova, Valdez, Seldovia, Anchorage, Sand Point.
Landings by Canadian vessels in Alaska included which were 968,000 in 1953, 1,055,000 in 1952 and 561,000 in 1951, and 70,000 lbs. in 1950.
** Includes landings made at Pelican.
NOTE: 1953 figures of the International Pacific Halibut Commission are preliminary and subject to further correction.

nearly 900,000 lbs. from lower Hescate Strait. The word of the wonderful fishing on the Goose Island and Horseshoe Grounds having gotten around, the boats headed for the Capt St. James area and left Forrester Island sub-area lightly fished, with the result that the northern sub-area's yield dropped by about 600,000 lbs.

The Westward sub-areas showed a peculiar trend. The early closure to Westward evidently stimulated the fleet to go back that way, and in the non-quota season 16 boats took 938,000 lbs. On the other hand, only 80,000 lbs. were taken from Area 4.

Canadian Cut Increases

The steady gains made by the Canadian fleet in the North Pacific halibut fishery continued in 1953, when the British Columbia fleet took 42.9% of the catch, the largest percentage ever noted. It is in marked contrast with the percentage of 14.4 taken by the Canadians in 1933.

OREGON AND CALIFORNIA HALIBUT LANDINGS — 1953

Month	California Pounds	Oregon Pounds
May	170,000	110,000
June	36,000	207,000
July	33,000	7,000
August	4,000	40,000
September	3,000	3,000
October	3,000	...
November	3,000	...
Total	252,000	367,000

NOTE: 1953 figures of the International Pacific Halibut Commission are preliminary and subject to further correction, particularly California's, which include some estimation.

One reason for the growth in the Canadian share was the energy with which the Canadians rushed back into Area 3 for the final trip, at a time when many of the Americans were calling it a season and heading for Seattle with their catches instead of selling at the Westward ports and getting one more trip.

The Area 2 landings exceeded those of Area 3 in 1953; something which has happened only once before since there were such things as areas in the business.

North Pacific Halibut Seasons

YEAR	AREA 2			AREA 3			YEAR
	Opened	Closed	Fishing Days	Opened	Closed	Fishing Days	
1933	Feb. 1	Aug. 25	206	Feb. 1	Oct. 26	268	1933
1934	Mar. 1	Aug. 19	172	Mar. 1	Oct. 27	241	1934
1935*	Mar. 1	Sept. 6	159*	Mar. 1	Dec. 26	270*	1935
1936	Mar. 16	Aug. 10	148	Mar. 16	Nov. 3	233	1936
1937	Mar. 16	July 28	135	Mar. 16	Oct. 19	218	1937
1938	Apr. 1	July 29	120	Apr. 1	Oct. 29	212	1938
1939	Apr. 1	July 29	120	Apr. 1	Oct. 28	211	1939
1940	Apr. 1	July 13	104	Apr. 1	Sept. 26	179	1940
1941	Apr. 1	June 30	91	Apr. 1	Sept. 14	167	1941
1942	Apr. 16	June 29	75	Apr. 16	Sept. 25	163	1942
1943	Apr. 16	June 20	66	Apr. 16	Sept. 8	146	1943
1944**	Apr. 16	July 9	51**	Apr. 16	Nov. 30	194**	1944
1945	May 1	June 15	46	May 1	Sept. 24	147	1945
1946	May 1	June 11	42	May 1	Aug. 19	111	1946
1947***	May 1	June 8	39***	May 1	Aug. 17	109***	1947
1948	May 1	June 1	32	May 1	July 11	72	1948
1949	May 1	June 3	34	May 1	July 12	73	1949
1950	May 1	June 1	32	May 1	July 5	66	1950
1951	May 1	May 28	28 †	May 1	June 25	56	1951
1952	May 14	June 8	26†	May 14	July 12	58†	1952
1953	May 17	June 9	24†	May 17	July 7	52†	1953

NOTE: — All dates given are for the legal season. Fishing times given are actual periods of fishing, with allowance made in certain years for delays in fishing due to strikes and disputes. Closure generally at midnight of dates given.

* Fleet tied-up voluntarily until April 1.
** Fleet tied-up until May 20 in protest against OPA ceiling prices.
*** Seattle fleet largely tied-up until July 1, due to crew share dispute.
† Does not include special post-season open fishing periods in sub-areas.

Fish Nets
for
EVERY PURPOSE!
SEAKING
TRADEMARK
COTTON NETTING
This is the Genuine
STEEL GREY
LINEN GILL
NETTING
Imported
IRISH FLAX
NOTICE
This Netting is made from genuine
NYLOCK® TWINE
The Fish Net & Twine Co.
JERSEY CITY, N. J.

SEA KING

TRADEMARK

COTTON NETTING

For good fishing and good profits, stow aboard a good SEA KING cotton net or one of our many types of Gill Nets, as indicated on the left.

Your dealer knows FISH NET & TWINE Netting. Its fine reputation dates back more than a century.

•

Stocks carried by local dealers in:

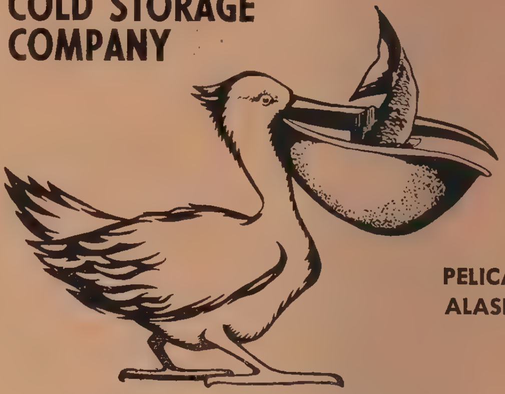
SEATTLE, WASHINGTON
RICHMOND, VIRGINIA
MILWAUKEE, WISCONSIN
JACKSONVILLE, FLORIDA
CUT OFF, LOUISIANA

The Fish Net & Twine Co.

308-310 BERGEN AVE., JERSEY CITY, N. J.
CHICAGO DIVISION
1150 DEPOT STREET
GLENVIEW, ILLINOIS

PELICAN

COLD STORAGE COMPANY



PELICAN
ALASKA

"CLOSEST TO THE FISH"

SPECIALISTS IN *Quality*

FISH FREEZING

BAIT, TEMPERED ICE, GEAR,
OIL, SUPPLIES, CHARTS
RADIO STATION

Banking and Customs Facilities Available

REPAIR

CONVERSION

CONSTRUCTION

TODD

SHIPYARDS CORPORATION

1 BROADWAY, NEW YORK 4, N. Y.

Los Angeles San Francisco Alameda Seattle
Galveston Houston New Orleans
New York Brooklyn Hoboken
Barranquilla London

1953 - Halibut Arrivals at British Columbia Ports - 1953

(Pounds)

MONTH	Prince Rupert Butedale**	New Westminster Vancouver, Namu	District No. 3 and Victoria	Total Canadian Vessels	American Vessels at Prince Rupert	GRAND TOTAL
May	6,661,000	1,221,000	1,124,000	9,006,000	433,000	9,439,000
June	7,280,000	2,321,000	694,000	10,295,000	695,000	10,990,000
July	2,386,000	721,000	...	3,107,000	751,000	3,858,000
August	1,548,000	496,000	1,000	2,045,000	60,000	2,105,000
September	41,000	249,000	...	290,000	...	290,000
October	6,000	1,000	...	7,000	...	7,000
November	2,000	...	...	2,000	...	2,000
TOTAL	17,924,000	5,009,000	1,819,000	24,752,000	1,939,000	26,691,000
Previous years						
1952	19,275,000	2,662,000	1,653,000	23,590,000	3,006,000	26,596,000
1951	15,717,000	2,819,000	1,923,000	20,459,000	4,381,000	24,840,000
1950	15,237,000	1,689,000	1,888,000	18,814,000	3,684,000	22,498,000
1949	13,745,000	2,129,000	2,189,000	18,063,000	4,205,000	22,268,000
1948	13,665,000	2,641,000	2,172,000	18,478,000	2,479,000	20,957,000
1947	17,868,000	4,298,000	1,819,000	23,985,000	2,585,000	26,570,000
1946	15,117,000	2,023,000	896,000	18,036,000	4,378,000	22,413,000
1945	11,606,000	2,340,000	1,163,000	15,109,000	4,571,000	19,680,000
1944	8,457,460	3,604,517	1,218,985	13,280,962	5,444,672	18,725,634
1943	6,381,348	5,155,435	1,331,575	12,907,123	12,337,126	25,018,553
1942	5,910,928	4,035,866	1,104,459	11,201,891	13,415,795	24,467,048
1941	8,625,079	3,139,021	1,014,192	12,959,499	10,033,720	28,812,612
1940	9,310,667	1,999,314	1,002,401	12,683,872	11,210,740	25,632,122
1939	9,904,289	3,018,504	445,500	13,465,162	9,319,026	22,687,319
1938	8,619,526	2,794,557	586,619	12,194,669	7,324,178	19,343,390
1937	9,026,372	2,333,370	377,796	11,765,314	7,015,057	18,773,489
1936	8,113,365	2,054,167	399,200	10,584,653	6,205,377	16,772,209
1935	7,636,704	2,246,196	349,300	10,206,054	6,927,581	17,159,781
1934	7,946,499	1,513,273	271,600	9,731,372	8,591,983	18,323,355

Does not include landings by Canadian vessels in Alaska of 968,000 lbs. in 1953, of 1,055,000 lbs. in 1952, of 561,000 lbs. in 1951 or of landings in the state of Washington of 50,000 lbs. in 1953 and of 74,000 lbs. in 1952.

**Includes landings from minor British Columbia Ports.

NOTE: 1953 figures of the International Pacific Halibut Commission are preliminary and subject to further corrections.

Alaska Trade Suffers

Alaska landings suffered as result of the operation of the non-quota season, plus the exceptional fishing well south down the coast, plus the light landings from Area 3. The territorial total was down 2.8 million from 1952.

Ketchikan and Juneau both were down, the former in particular; but Pelican and the Central Alaska ports showed substantial gains.

Prince Rupert's landings declined somewhat in 1952, with the southern ports' share increasing, as might be expected from the heavy fishing in the southern part of Hecate Strait. Total landings for the province actually were very close, up about 100,000 lbs. from 1952.

The Canadian fleet continued to land close to a million pounds of halibut in Alaska, taking advantage of the favorable prices offered at the Central Alaska ports to get in one more trip before Area 3 closed.

Seattle's Heaviest Day

The Seattle halibut market fairly shuddered under the shock of some of the daily landings in 1953. Largest recorded volume on the market was on June 1, with fares aggregating 1,312,000 lbs. on the board. The next day deliveries were down to 856,000 lbs., but they reached above 1 million pounds again on June 3.

POST-SEASON HALIBUT LANDINGS

Year	Area 2 Pounds	Area 3 Pounds
1937	278,000	...
1938	280,000	...
1939	372,943	...
1940	304,155	...
1941	510,204	...
1942	55,895	...
1943	856,360	...
1944	844,596	...
1945	920,000	...
1946	1,184,000	...
1947	392,997	...
1948	898,246	...
1949	870,138	58,632
1950	319,745	...
1951	885,000	94,000
1952	461,000	11,000
1953	603,000	13,000

NOTE: —Under regulations of the International Fisheries Commission, boats operating under permit from the commission and engaged in bona fide fishing operations with long-line gear for species other than halibut may land halibut taken incidentally to such operations to the amount of 1 pound of halibut to each 7 pounds of other species so taken and landed. Such operations may be conducted after the close of one halibut area while another remains open, or until November 15.

In addition to the direct landings at Seattle, this period saw about 100,000 lbs. landed at Everett, plus delivery of a packer-load of 200,000 lbs. shipped down from Petersburg.

The new halibut treaty was ratified by the Senate in July, while Congress also passed the enabling act putting it into effect. The only outward change notable before the end of the year was in the commission's name, which ratification of the new convention became "International Pacific Halibut Commission," after 30 years of being known as the "International Fisheries Commission," a term which became too general with the application to other fisheries of the means of international control, inaugurated and proven in the case of the halibut convention.

SIZE OF HALIBUT FLEET

(INCLUDES REGULAR HALIBUT BOATS ONLY)

YEAR	UNITED STATES FLEET				CANADIAN FLEET				COMBINED FLEETS			
	Area 2	Area 2	Area 3	Area 3	Area 2	Area 2	Area 3	Area 3	Area 2	Area 2	Area 3	Area 3
	#of Boats	#of Men	#of Boats	#of Men	#of Boats	#of Men	#of Boats	#of Men	#of Boats	#of Men	#of Boats	#of Men
1943	247	1,037	107	942	162	767	3	24	409	1,804	110	966
1944	278	1,056	84	753	278	831	4	34	485	1,887	88	767
1945	316	1,253	97	837	175	867	3	26	491	2,120	100	863
1946	373	1,373	116	921	187	952	5.	41	560	2,325	121	962
1947	350	1,302	119	887	215	1,168	5	40	565	2,470	124	927
1948	403	1,496	139	1,095	249	1,221	5	39	652	2,717	144	1,134
1949	374	1,452	149	1,134	225	1,153	5	41	599	2,605	154	1,175
1950	426	1,654	150	1,147	235	1,210	5	39	661	2,864	155	1,186
1951	394	1,574	148	1,091	270	1,346	8	66	664	2,920	156	1.156
1952	295	1,243	134	885	233	1,211	8	64	528	2,454	142	949
1953	273	1,147	139	883	229	1,151	20	159	502	2,298	159	1,042

WHIZ

SELECTED SEA FOODS

Producers and Distributors

Fresh, Frozen, Salt, Smoked, and Shell Fish
—Canned Fish Products—

Whiz Fish Products Company

2000 Alaskan Way

Seattle, 1, Washington

Telephone SEneca 2155
Teletype Seattle 104

---

proven performance WINS the VOTE of CONFIDENCE in AMERIO DOUBLE CONTACT PRESSURE PLATE FREEZERS

U.S. Pat. No. 2,608,069

Their high efficiency and speed assure uniformly frozen packages. You need no expensive nor expansive machinery which has to first "freeze the air" before your products can start freezing.

Their high production output coupled with simple and economical operations make "Amerios" the first choice of leading food processing plants. They do a better job!

Those who have installed Amerio Freezers continually add additional units as volume expands. You, too, should freeze with "Amerios".

We shall appreciate your inquiry

Designed For
Ammonia, Brine or Freon
Refrigerant

Amerio
Contact Plate Freezers Inc.
Union City, N.J.
"It's the Contacts that Count"

Send For
Illustrated
Brochure

1953 -MILD CURED SALMON-1953

Company	Location	Tierces (825 lbs. Net)
ALASKA		
Atlantic & Pacific Packing Co.	Pelican	16
	Juneau	135
Booth Fisheries Corporation	Pelican	160
Farwest-Wrangell Co.	Wrangell	176
Halibut Producers Cooperative	Sitka	80
	Pelican	204
	Ketchikan	8
	Juneau	3
McCallum-Legaz Fish Co.	Sitka	168
New England Fish Co.	Ketchikan	389
Northern Commercial Co.	Yukon	100
Northern Products Corporation	Juneau	13
	Pelican	170
	Petersburg	208
	Sitka	345
Oxenberg Bros.	Juneau	42
	Ketchikan	101
E. C. Phillips	Ketchikan	49
Polar Fisheries	Pelican	51
	Wrangell	57
Kayler-Dahl Fish Co.	Petersburg	313
Rupert Fish Co.	Ketchikan	55
	Pelican	18
San Juan Fishing & Packing Co.	Ketchikan	101
Sebastian-Stuart Fish Co.	Pelican	48
	Wrangell	28
Vita Food Products	Juneau	189
	Pelican	299
	Petersburg	118
	Sitka	276
	Wrangell	16
Whiz Fish Products Co.	Ketchikan	186
	Pelican	362
TOTAL ALASKA		4,484

Company	Location	Tierces (825 lbs. Net)
BRITISH COLUMBIA		
British Columbia Packers, Ltd.	All stations	105
Canadian Fishing Co.	All stations	29
Fishermen's Cooperative Federation	Prince Rupert	518
Seafood Products, Ltd.	Vancouver	90
TOTAL BRITISH COLUMBIA		742
PUGET SOUND		
Booth Fisheries Corporation	Seattle	132
Eardley Fisheries Co.	Seattle	836
Kayler-Dahl Fish Co.	Seattle	310
McCallum-Legaz Fish Co.	Seattle	70
New England Fish Co.	Seattle and Everett	206
Oxenberg Bros.	Seattle	21
San Juan Fishing & Packing Co.	Seattle	430
Sebastian-Stuart Fish Co.	Seattle	65
Washington Fish & Oyster Co.	Seattle	168
Whiz Fish Products Co.	Seattle	450
TOTAL PUGET SOUND		2,688
OREGON		
Vita Food Products Co.	Oregon Coast	30
CALIFORNIA		
Grader Fish Co.	Fort Bragg	140
Miscellaneous	California	1,200
TOTAL CALIFORNIA		1,340
GRAND TOTAL, PACIFIC COAST		9,284

1953-Seattle-Weighted Average Prices Paid to Fishermen-1953

	Cts. per Pound											
SPECIES	Dec. '52	Jan. '53	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.
Cod, true, ex-vess., Dr.	8.75	8.75	8.75	8.75	7.0	...	...	7.0	...	7.0	7.0	...
Cod, true, ex-vess., Rd.	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Flounder, ex-vess., Rd.	6.0	5.0	5.0	5.0	...	4.0	4.0	...	...	4.0	4.0	4.0
Halibut, No. 1, ex-vess., Dn.	...	...	...	...	...	18.0	16.5	19.9	19.6	22.6	25.7	28.9
Halibut, No. 2, ex-vess., Dn.	...	...	...	...	...	14.9	14.8	17.4	16.4	18.5	...	...
Lingcod, ex-vess., Dr.	10.8	14.6	10.6	11.1	8.8	9.2	8.8	8.8	7.9	8.8	8.1	9.0
Lingcod, ex-vess., Rd.	8.5	...	...	...	...	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Ocean Perch, ex-vess., Rd.	...	5.0	...	...	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Rockfish, ex-vess., Dr.	5.6	...	8.0	7.2	...	...	5.0	5.7	4.5	5.0	5.0	5.2
Rockfish, ex-vess., Rd.	5.5	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Sablefish, ex-vess., Dr.	12.0	...	...	12.0	8.2	11.7	13.5	15.8	15.2	14.4	15.6	14.8
Sablefish, ex-vess., Rd.	6.0	...	...	...	...	...	6.0	6.0	6.0	6.0	6.0	6.0
Salmon:												
Chinook, large, ex-vess, Dn.	...	...	...	...	46.9	37.8	38.6	41.0	43.9	43.6	40.0	...
Chinook, small, ex-vess., Dn.	...	...	...	...	46.6	31.6	31.1	30.8	32.9	30.9	36.0	...
Chinook, white, ex-vess., Dn.	...	...	...	...	44.3	24.5	25.8	24.3	25.4	24.3	23.0	...
Chinook, ex-vess., Rd.	...	...	...	...	...	...	...	14.0	...	14.0	16.0	...
Chum, ex-vess., Rd.	14.0	14.0	...	...	...	...	...	...	...	12.0	14.0	13.0
Silver, ex-vess., Dn.	...	...	...	...	...	...	20.1	22.0	26.5	28.9	33.0	...
Silver, ex-vess., Rd.	20.0	...	...	...	...	...	...	13.0	13.0	13.0	19.0	18.0
Pink, ex-vess., Rd.	...	...	...	...	...	...	...	11.5	11.5	11.5	...	...
Sockeye, ex-vess., Rd.	...	...	...	...	...	...	...	26.0	26.0	...	...	...
Sole, English, ex-vess., Rd.	9.0	9.0	9.0	9.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Sole, Petrale, ex-vess., Rd.	11.0	11.0	11.0	11.0	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Sole, Other, ex-vess., Rd.	6.2	6.0	7.3	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Tuna, Albacore, ex-vess., Rd.	...	...	...	...	...	...	...	...	...	...	20.5	...

HOLDINGS OF FROZEN SALMON IN CANADA BY MONTHS

Year	(Pounds)												Year
	Jan.	Feb.	March	April	May	June	July	August	September	October	November	December	
1943	6,388,157	4,182,422	3,187,367	1,424,622	749,130	421,899	618,566	1,292,092	2,491,083	3,922,968	7,861,284	9,720,826	1943
1944	8,245,459	6,228,542	4,036,324	2,572,067	1,723,599	1,192,453	1,323,970	2,225,799	4,458,686	7,569,646	9,592,929	8,525,062	1944
1945	5,754,484	4,212,779	3,064,075	1,916,384	1,224,894	653,660	975,614	2,603,913	5,848,648	8,889,338	12,264,609	11,286,939	1945
1946	8,995,555	6,201,817	4,664,805	2,859,525	1,470,544	719,534	1,477,539	2,310,009	4,287,429	6,910,578	10,414,810	12,529,428	1946
1947	10,484,688	8,068,793	5,641,958	4,244,254	3,066,183	2,041,997	1,849,142	3,317,623	4,788,724	6,115,604	10,991,495	11,346,880	1947
1948	12,471,000	10,916,000	8,925,000	5,322,000	3,454,000	2,821,000	2,721,000	3,992,000	4,679,000	6,007,000	12,481,000	10,379,000	1948
1949	9,310,000	7,786,000	5,574,000	3,880,000	2,997,000	2,467,000	3,220,000	4,770,000	7,350,000	9,306,000	14,987,000	11,573,000	1949
1950	9,573,000	8,243,000	6,045,000	4,095,000	2,916,000	2,193,000	2,526,000	3,493,000	7,153,000	13,008,000	16,790,000	14,409,000	1950
1951	12,032,000	10,172,000	6,808,000	5,009,000	4,023,000	2,597,000	2,640,000	4,450,000	7,560,000	10,811,000	16,479,000	14,998,000	1951
1952	13,342,000	10,838,000	9,247,000	6,657,000	5,785,000	4,394,000	5,185,000	6,446,000	9,239,000	10,532,000	12,236,000	11,480,000	1952
1953	10,460,000	8,094,000	5,813,000	4,279,000	2,963,000	2,604,000	3,302,000	4,083,000	7,432,000	10,341,000	*	*	1953

*Data not available. NOTE— All figures in accordance with latest reports. Source: Dominion Bureau of Statistics, Dept. of Trade & Commerce.

KETCHIKAN COLD STORAGE

KETCHIKAN . . .

is a good port close to railhead with frequent boat service . . . Boxes manufactured locally . . . Good supply of skilled labor . . . Modern processing facilities.

KETCHIKAN COLD STORAGE COMPANY

Inquiries Solicited
J. W. MENDENHALL, Manager

OUR PLANT . . .

is within easy reach of HALIBUT, SALMON and SABLEFISH grounds. Fish from the icy waters of ALASKA are better when frozen in ALASKA.

KETCHIKAN ALASKA

ALASKA STATIONS
WRANGELL
CAPE POLE
SAGINAW BAY
TEBENKOF BAY

SEATTLE (9) OFFICE
740 WESTLAKE N.
PHONE MAIN 7448

ARB

Highest Quality Alaska Canned Salmon

WRANGELL, ALASKA

This mark on Mild Cured Salmon and Frozen Fish distinguishes them as Alaska fishery products packed under closest personal supervision . . . Goods that we are proud to offer.

. . FARWEST WRANGELL CO., INC.

PACIFIC MILD CURED SALMON PACK

(IN TIERCES OF 825 LBS. NET WEIGHT)

YEAR	Alaska	British Columbia	Puget Sound	Columbia River	Oregon Coast	California Coast	Sacramento River	Kamchatka	Recapitulation		ANNUAL TOTALS	YEAR
									Kings	Silvers		
1900	. . .	. . .	. . .	1,275	. . .	. . .	950	. . .	Segregation of pack as to species not available for years prior to 1923.	. . .	2,225	1900
1901	67	. . .	600	3,000	. . .	. . .	3,100	. . .		. . .	6,767	1901
1902	67	. . .	425	4,213	188	504	2,325	. . .		. . .	7,722	1902
1903	8	. . .	824	6,725	. . .	354	3,600	. . .		. . .	11,511	1903
1904	34	. . .	1,250	9,088	. . .	448	4,719	. . .		. . .	15,539	1904
1905	189	1,175	3,000	9,805	415	310	2,979	. . .		. . .	17,873	1905
1906	1,126	957	. . .	8,000	740	685	2,177	. . .		. . .	13,685	1906
1907	1,657	1,993	2,060	6,070	860	722	4,102	. . .		. . .	17,464	1907
1908	1,378	1,060	. . .	4,960	. . .	252	3,243	. . .		. . .	10,893	1908
1909	2,292	1,560	2,109	5,540	664	991	5,111	. . .		. . .	18,267	1909
1910	3,357	1,638	2,435	7,922	1,465	75	5,516	. . .		. . .	22,408	1910
1911	3,164	2,006	2,745	8,185	1,377	770	2,011	. . .		. . .	19,758	1911
1912	5,245	1,380	3,013	5,824	3,479	100	3,274	. . .		. . .	22,315	1912
1913	7,440	2,125	3,631	5,746	2,681	550	4,789	. . .		. . .	26,952	1913
1914	3,872	3,182	1,934	5,205	457	1,476	1,829	. . .		. . .	17,955	1914
1915	2,966	1,119	2,235	4,078	333	945	1,630	. . .		. . .	13,306	1915
1916	4,475	767	1,755	4,656	194	1,069	650	. . .		. . .	13,566	1916
1917	2,955	429	1,063	1,886	. . .	300	1,508	. . .		. . .	8,181	1917
1918	4,234	729	1,093	1,804	275	721	1,913	. . .		. . .	9,869	1918
1919	6,803	1,173	2,423	3,328	148	2,381	2,355	. . .		. . .	18,611	1919
1920	2,770	1,116	2,036	2,275	102	1,793	1,345	. . .		. . .	11,437	1920
1921	3,966	1,076	4,517	3,051	160	1,251	812	. . .		. . .	14,833	1921
1922	5,158	2,253	4,727	1,621	162	550	1,195	. . .		. . .	15,666	1922
1923	4,075	1,819	5,799	1,769	176	1,229	606	. . .	15,129	344	15,473	1923
1924	6,069	2,969	6,409	2,320	286	2,624	1,291	. . .	21,476	492	21,968	1924
1925	7,119	3,098	5,600	2,746	547	2,241	1,523	500	22,530	844	23,374	1925
1926	5,781	2,183	4,087	1,055	1,205	929	1,767	650	16,585	1,072	17,657	1926
1927	8,982	2,689	5,160	951	918	927	1,125	854	19,390	2,216	21,606	1927
1928	5,784	2,676	4,304	1,305	2,163	1,686	179	783	14,051	4,046	18,880	1928
1929	5,477	3,016	4,311	1,969	1,787	1,160	155	1,083	15,749	3,209	18,958	1929
1930	5,331	2,630	4,361	1,068	102	1,184	124	2,144	16,049	895	16,944	1930
1931	4,123	1,083	5,700	1,251	372	1,027	164	712	13,862	570	14,432	1931
1932	5,560	1,542	3,650	2,012	1,119	752	294	640	13,443	2,126	15,569	1932
1933	4,852	3,097	3,527	2,431	660	1,392	37	340	15,295	1,041	16,336	1933
1934	4,908	4,657	3,882	1,855	270	1,572	5	776	16,960	965	17,925	1934
1935	5,487	2,665	3,563	1,730	210	2,090	439	670	15,450	1,404	16,854	1935
1936	5,222	1,642	4,897	1,138	68	1,939	366	840	15,611	495	16,106	1936
1937	6,373	4,055	2,775	604	. . .	1,026	49	778	15,552	108	15,660	1937
1938	7,786	3,128	3,657	1,292	387	627	945	787	16,451	2,158	18,609	1938
1939	7,724	2,802	2,937	501	20	417	119	600	14,905	224	15,129	1939
1940	5,210	693	3,531	33	. . .	711	308	11	10,283	714	10,497	1940
1941	8,862	1,474	3,561	229	. . .	360	15	. . .	14,174	302	14,501	1941
1942	6,748	1,055	2,494	20	. . .	. . .	. . .	. . .	10,241	76	10,317	1942
1943	3,869	811	1,022	21	. . .	166	. . .	. . .	5,278	611	5,889	1943
1944	3,518	2,019	959	16	. . .	1,259	1,329	. . .	7,969	*1,050	9,100	1944
1945	7,763	1,209	1,790	159	. . .	*1,065	1,570	. . .	10,843	*3,200	13,556	1945
1946	6,824	1,975	2,170	96	. . .	. . .	†2,764	. . .	13,216	613	13,829	1946
1947	5,919	1,675	2,129	99	. . .	†	919	. . .	10,631	110	10,741	1947
1948	5,076	1,025	2,282	77	. . .	. . .	. . .	. . .	8,490	36	8,456	1948
1949	4,449	1,177	2,049	86	. . .	891	. . .	. . .	8,625	27	8,652	1949
1950	4,809	889	3,264	90	. . .	1,214	. . .	. . .	10,109	157	10,266	1950
1951	4,671	897	2,436	20	. . .	1,200	. . .	. . .	9,150	74	9,224	1951
1952	3,489	752	2,318	4	. . .	493	. . .	. . .	7,052	. . .	7,052	1952
1953	4,484	742	2,688	30	. . .	1,340	. . .	. . .	9,209	75	9,284	1953

NOTE:– Mild cured Falls not included. *Estimated segregation. In 1945 the Silver category includes 200 tierces of Sockeyes.
†Segregation as to district not available.

1953 -Seattle Halibut Fleet Landings by Months- 1953

MONTHS	Trips	HALIBUT NO. 1		HALIBUT NO. 2		LINGCOD		ROCKFISH		SABLEFISH		TOTAL	
		Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
January	1	...	...	. .	...	3,628	$ 744	...	...	...	...	3,628	$ 744
February	4	...	...	...	...	33,747	3,554	1,176	$ 94	...	...	34,923	3,648
March	4	...	...	...	...	14,989	1,722	554	40	...	...	15,543	1,762
April	...	...	...	...	...	...	...	...	...	...	...	...	...
May	49	1,448,036	$ 260,117	448,908	$ 66,938	4,297	513	...	...	1,082	$ 130	1,902,323	327,698
June	137	3,856,852	634,990	2,088,822	309,627	2,410	151	2,270	104	9,065	1,438	5,959,419	946,310
July	80	1,502,801	299,379	1,512,081	263,179	...	...	5,796	329	115,217	18,969	3,135,895	581,856
August	75	914,772	179,661	642,158	105,383	11,140	557	60,650	2,752	247,389	37,666	1,876,109	326,019
September	60	260,883	59,074	220,744	42,118	...	...	38,390	1,920	725,952	104,740	1,245,969	207,852
October	44	57,812	14,859	...	...	4,055	203	14,874	744	512,384	79,864	589,125	95,670
November	32	31,358	9,060	...	...	10,860	997	13,938	720	291,323	43,084	347,479	53,861
TOTAL	486	8,072,514	1,457,140	4,912,713	787,245	85,126	8,441	137,648	6,703	1,902,412	285,891	15,110,413	2,545,420
1952 Total	527	6,613,702	$ 1,544,979	4,685,046	$ 1,018,696	522,490	$ 73,791	181,359	$ 9,757	1,597,801	$ 240,853	13,600,398	$ 2,888,076
1951 Total	485	6,011,835	1,362,710	3,628,699	740,182	279,953	39,354	244,289	16,453	2,004,053	265,082	12,168,829	2,423,781
1950 Total	371	4,461,658	1,237,069	2,921,919	730,756	363,641	32,974	152,139	8,052	1,090,129	196,838	8,989,486	2,204,577
1949 Total	473	4,953,126	1,119,834	4,166,069	797,911	418,202	39,457	192,544	12,894	1,813,775	177,709	11,543,370	2,147,796
1948 Total	461	4,990,417	1,136,824	4,089,321	742,761	491,383	53,744	229,698	14,387	1,372,309	227,947	11,200,428	2,175,663
1947 Total	302	3,705,948	972,481	1,887,355	423,403	301,745	31,630	165,098	12,149	1,378,694	179,151	7,438,840	1,619,199
1946 Total	458	6,823,696	1,509,839	6,299,384	1,286,742	261,803	23,787	218,598	14,136	1,358,433	199,832	14,961,914	3,034,336
1945 Total	459	6,547,387	1,148,683	5,376,141	2,008,265	893,283	86,952	287,623	24,030	572,376	65,816	13,676,821	2,185,062

ALASKA'S Finest
FROZEN Fish
SITKA
BRAND
BRAND
PACKED AND SHIPPED BY
SITKA COLD STORAGE CO.
SITKA, ALASKA

Producers and Distributors of

"SITKA" BRAND FROZEN HALIBUT, SALMON AND SABLE FISH CAUGHT IN THE GLACIER CHILLED WATERS OF ALASKA BY AMERICAN FISHERMEN

SITKA COLD STORAGE COMPANY

PLANT AND OFFICE
BOX 78
SITKA, ALASKA

SEATTLE ADDRESS
PIER 42 SOUTH
SEATTLE, WASHINGTON

NORTHERN PRODUCTS CORPORATION

200 BELL STREET DOCK
SEATTLE, U.S.A.

PIER 66
EL 6677

Distributors

American and Canadian

MILD CURED and FROZEN SALMON

CANNED SALMON

CABLE ADDRESS — "NOPRO"-SEATTLE — ALL CODES

FROZEN

Pacific fish freezing in 1953 hovered at virtually the same horizon established in 1951 and maintained in 1952. There was less than 1 million pounds separating the totals of the last three years, but they represented an average reduction of about 7½% from the high levels of the two preceding years.

Most significant decline noted in 1953 freezing was 28% drop in fillet freezing, shared by British Columbia, Washington and Oregon.

FISH FREEZING on the Pacific Coast in 1953 remained high, and showed remarkably small departure from the activity of the two previous years, although there were a number of internal adjustments in volume of the several product categories. Regional shares on the whole showed rather slight variation, with British Columbia continuing to maintain its leadership handily—although Alaska moved up substantially while the Canadian poundage declined somewhat. The Territory's gains, while great, were not sufficient to displace the Province as the Pacific's fish freezing center.

Halibut freezing went up strongly in 1953, reflecting the improved inventory position, shorter season and larger volume produced in 1953. It overtopped the year before by 9 million pounds, and with 47.8 million

1953-PACIFIC FROZEN SHELLFISH-1953

Company	Location	Dungeness Crabmeat (Pounds)	King Crabmeat (Pounds)	Shrimpmeat (Pounds)	Clams Shucked (Pounds)	Oysters Shucked (Pounds)	Total Shellfish (Pounds)
Alaska-Fresh Co.	Seattle	...	123,620	...	...	...	123,620
Booth Fisheries Corp.	Seattle	...	...	...	...	30,000	30,000
British Columbia Packers, Ltd.	All Stations	14,300	...	34,100	...	74,600	123,000
Canadian Fishing Co.	Vancouver	...	...	4,992	...	...	4,992
Cordova Fish & Cold Storage Co.	Cordova	102,960	...	...	..	...	102,960
Hallmark Fisheries	Coos Bay, Oregon	82,500	...	...	...	...	82,500
Kayler-Dahl Fish Co.	Petersburg	30,000	...	140,000	100,000	...	270,000
Ketchikan Cold Storage Co.	Ketchikan	95,000	...	...	...	...	95,000
King Crab, Inc.	Kodiak	...	33,000	...	...	...	33,000
Lazio Fish Co., Tom	Eureka, California	17,352	...	67,352	...	...	84,704
New England Fish Co.	Seattle - Everett	4,200	...	...	...	...	4,200
	Astoria	4,535	...	...	...	...	4,535
Northern Oyster Co.	Oysterville	...	...	...	...	11,250	11,250
Pacific Pearl of Alaska, Inc. *	Ketchikan	62,010	...	...	...	...	62,010
Portland Fish Co.	Portland	19,343	...	...	4,905	76,943	101,191
Petersburg Cold Storage Co.	Petersburg	8,700	...	...	...	...	8,700
San Juan Fishing & Packing Co.	Seattle	18,000	...	...	...	...	18,000
	Warrenton, Oregon	24,260	...	...	6,500	...	30,760
Tulloch Fisheries, Ltd.	Vancouver	2,000	...	...	...	15,000	17,000
Wakefield's Deep Sea Trawlers	Floating	...	550,000	...	...	...	550,000
Washington Fish & Oyster Co.	Seattle	16,286	...	...	480	2,368	19,134
Washington Fish Co.	Aberdeen	...	...	...	200	...	200
Whiz Fish Products Co.	Seattle	30,000	...	...	...	...	30,000
Willapa Bay Oyster Co.	South Bend	...	...	...	...	75,000	75,000
Total		531,446	706,620	246,444	112,085	285,161	1,881,756

*Also froze 1590 dozen whole cooked crab.

SALMON FREEZING IN CANADA BY MONTHS

Year	Jan. (Pounds)	Feb.	March	April	May	June	July	August	September	October	November	December	TOTAL
1943	42,410	76,821	1,722	1,410	46,691	579,333	1,289,797	1,842,880	3,306,198	4,693,989	2,738,670	194,089	14,814,010
1944	190,468	366,346	199,226	34,334	35,166	799,534	1,736,542	2,902,804	3,602,202	3,489,092	490,764	216,862	14,063,340
1945	419,230	95,244	360,661	19,945	158,305	822,475	822,475	3,789,008	4,264,479	4,264,479	1,313,675	401,122	16,731,098
1946	18,904	520,509	902,832	43,216	114,952	1,213,867	2,131,929	3,098,060	3,709,790	6,134,139	3,262,982	421,969	21,573,149
1947	271,572	221,343	270,066	41,620	342,709	921,265	2,328,428	2,659,952	2,628,493	6,477,323	1,873,407	48,000	18,084,178
1948	443,000	147,000	7,000	15,000	243,000	1,498,000	2,237,000	2,626,000	2,771,000	10,387,000	2,009,000	291,000	22,674,000
1949	157,000	22,000	33,000	107,000	242,000	1,935,000	2,961,000	4,565,000	3,917,000	7,362,000	1,463,000	24,000	22,788,000
1950	4,000	22,000	22,000	5,000	227,000	1,224,000	2,462,000	5,246,000	8,678,000	7,149,000	702,000	8,000	25,749,000
1951	25,000	72,000	2,000	11,000	229,000	1,114,000	2,677,000	4,329,000	4,690,000	6,989,000	1,311,000	16,000	21,465,000
1952	10,000	29,000	100,000	80,000	395,000	1,804,000	3,227,000	5,244,000	3,034,000	2,151,000	1,508,000	18,000	17,600,000
1953	28,000	72,000	27,000	86,000	367,000	1,513,000	2,644,000	4,679,000	5,149,000	‡	‡	‡	14,565,000

‡ Data not available. NOTE — All figures in accordance with latest reports. Source: Dominion Bureau of Statistics, Dept. of Trade & Commerce

PALADINI BRAND QUALITY FISH

Fresh from Sea to You!

READY TO USE
Paladini
FRESH FROZEN SEA FOOD
SAN FRANCISCO · LOS ANGELES · OAKLAND, CALIFORNIA
FRESH FROZEN SOLE FILLETS

IN CONSUMER PACKAGES

SOLE FILLETS
OCEAN PERCH FILLETS
COD FILLETS, SALMON FILLETS
ROCK FISH FILLETS
DRESSED SMELTS

Years of Experience
Producing the Finest Quality
Sea Foods for the American Trade

A. PALADINI, INC.

Main Office: 542 Clay St., San Francisco 26, California

BRANCHES: SAN FRANCISCO OAKLAND LOS ANGELES Crescent City Fields Landing
Eureka Ft. Bragg Bodega Bay Pt. Reeves Pittsburg Santa Cruz Monterey

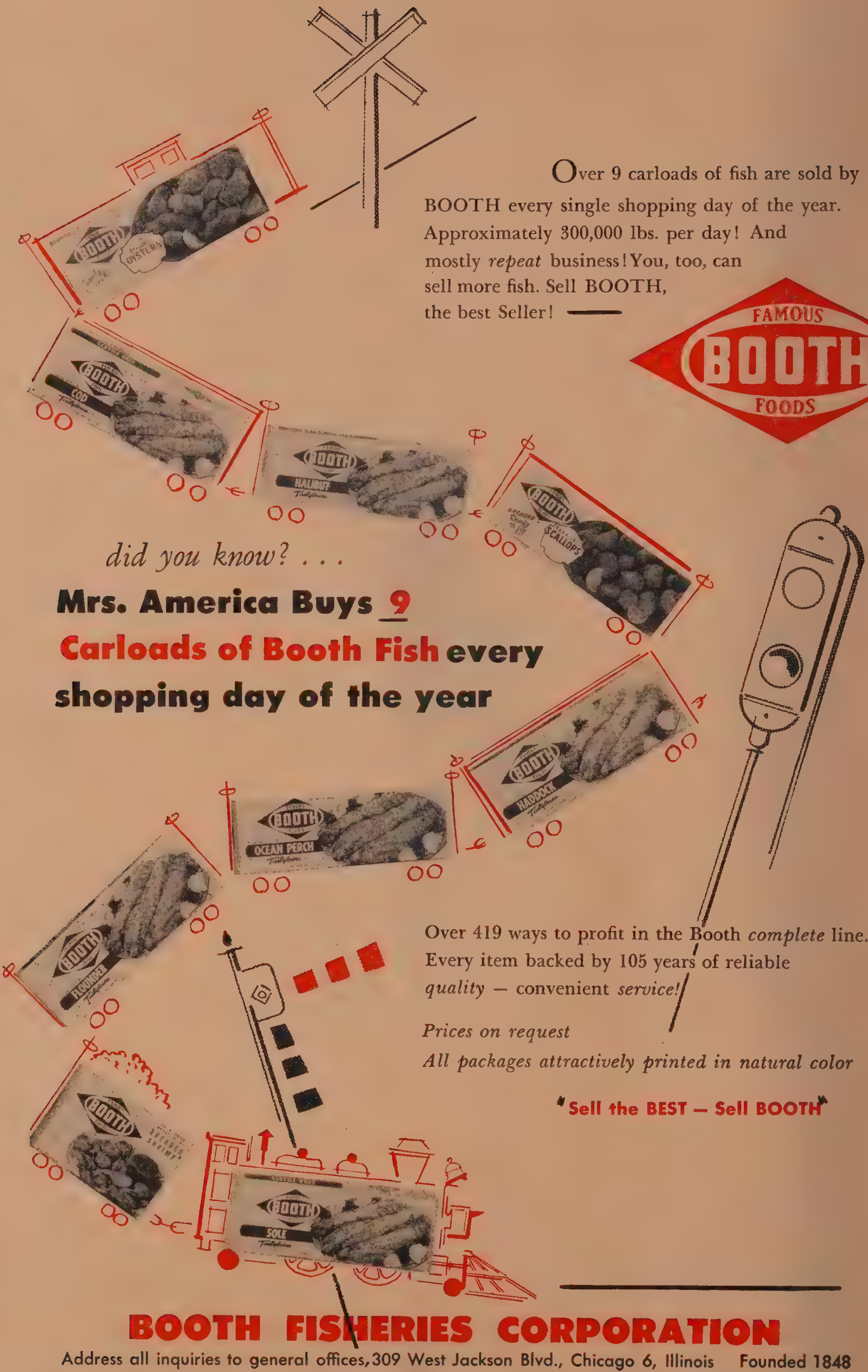
1953 - PACIFIC FROZEN FISH - 1953

Company	Cannery Location	Halibut (Pounds)	Salmon (Pounds)	Sablefish (Pounds)	Fillets (Pounds)	Miscellaneous (Pounds)	Total (Pounds)
ALASKA							
Alaska Fish & Farm Products	Anchorage	38,000	67,000	...	2,200	2,800	110,000
Aleutian Cold Storage Co.	Sand Point	1,027,209	...	...	...	...	1,027,209
Booth Fisheries Corp.	Alaska	720,000	290,000	...	...	...	1,010,000
Cordova Fish & Cold Storage Co.	Cordova	689,097	...	...	...	...	689,097
Juneau Cold Storage Co.	Juneau	1,705,222	868,946	333,919	...	557,060	3,465,147
Kayler-Dahl Fish Co.	Petersburg	1,250,000	425,000	850,000	...	...	2,525,000
Ketchikan Cold Storage Co.	Ketchikan	1,833,178	128,396	59,500	...	...	2,021,074
McCallum-Legaz Fish Co.	Sitka	400,000	150,000	...	...	1,000	551,000
New England Fish Co.	S. E. Alaska	2,150,000	790,000	144,000	...	...	3,084,000
Oxenberg Bros.	Juneau	...	34,400	40,193	...	...	74,593
	Ketchikan	13,561	63,343	...	...	...	76,904
	Petersburg	...	...	49,402	...	...	49,402
Pelican Cold Storage Co.	Pelican	2,575,111	1,080,742	62,957	...	110,082	3,828,892
Petersburg Cold Storage Co.	Petersburg	1,804,277	...	475,675	44,475	...	2,324,427
Phillips, E. C.	Ketchikan	1,050,000	175,000	30,000	...	...	1,255,000
San Juan Fish & Packing Co.	Ketchikan	413,261	70,981	...	...	5,000	489,242
Sebastian-Stuart Fish Co.	Pelican	...	64,813	...	...	...	64,813
Sitka Cold Storage Co.	Sika	1,247,348	180,122	141,060	...	54,523	1,623,053
Vita Food Products Co.	Juneau	...	213,687	38,254	...	...	251,941
	Pelican	25,648	342,458	74,659	...	...	442,765
	Petersburg	...	207,842	189,058	...	...	396,900
	Sitka	24,143	306,936	...	...	...	331,079
	Wrangell	...	2,595	...	...	...	2,595
Washington Fish & Oyster Co.	Port Williams	1,381,000	...	...	...	...	1,381,000
Wrangell Cold Storage Co.	Wrangell	375,446	276,986	94,741	...	...	747,173
Whiz Fish Products Co.	Ketchikan	40,000	120,000	16,000	...	...	176,000
	Pelican	215,000	480,000	...	...	...	695,000
	Petersburg	100,000	...	...	...	...	100,000
	Seldovia	525,000	...	...	...	...	525,000
	Tyee	125,000	60,000	...	...	...	185,000
Total Alaska		19,727,501	6,399,247	2,599,418	46,675	730,465	29,503,306
BRITISH COLUMBIA							
Booth Fisheries Co.	Prince Rupert	703,000	362,000	...	110,000	...	1,175,000
British Columbia Packers, Ltd.	All Stations	4,431,100	5,778,500	334,471	3,666,500	330,929	14,541,500
Canadian Fishing Co., Ltd.	Butedale	1,356,319	136,139	207,076	...	12,270	1,711,804
	Prince Rupert	2,134,534	1,117,811	79,989	541,555	14,951	3,888,840
	Vancouver	1,965,510	2,799,169	55,033	184,193	79,453	5,083,358
Fishermen's Cooperative Federation	Vancouver	1,004,661	1,208,031	...	225,103	74,116	2,511,911
	Victoria	7,676	213,480	...	...	6,890	228,046
Prince Rupert's Fishermen's Cooperative Assn.	Prince Rupert	3,291,959	2,051,258	378,383	395,270	5,786	6,122,656
	Seal Cove	432,211	148,772	. . .	. . .	. .	580,983
	Vancouver	916,749	. . .	. . .	90,964	. .	1,007,713
San Juan Fishing & Packing Co.	Prince Rupert	719,405	87,528	2,864	84,705	...	894,502
	Vancouver	1,251,336	129,884	20,420	164,707	...	1,566,347
Total British Columbia		18,214,460	14,032,572	1,078,236	5,462,997	524,395	39,312,660
PUGET SOUND							
Booth Fisheries Corp.	Seattle	1,100,000	1,027,000	202,000	207,000	...	2,536,000
Chase Seafood Co.	Everett	14,000	...	15,000	115,000	...	144,000
	Seattle	25,000	80,000	87,000	...	...	192,000
Eardley Fisheries Co.	Seattle	1,000,000	200,000	200,000	1,000,000	50,000	2,450,000
Kayler-Dahl Fish Co.	Seattle	125,000	310,000	....	...	...	435,000
McCallum-Legaz Fish Co.	Seattle	650,000	150,000	170,000	20,000	5,000	995,000
New England Fish Co.	Seattle and Everett	1,600,000	782,000	8,000	87,000	...	2,477,000
San Juan Fishing & Packing Co.	Seattle	1,426,735	1,010,177	512,469	117,834	52,204	3,119,419
Sebastian-Stuart Fish Co.	Seattle	336,995	255,956	12,550	...	2,180	607,681
Washington Fish & Oyster Co.	Seattle	994,141	1,209,235	194,715	7,355	79,247	2,484,693
Whiz Fish Products Co.	Seattle	550,000	550,000	250,000	100,000	100,000	1,550,000
Miscellaneous		1,651,573	806,613	...	...	173,971	2,632,157
Total Puget Sound		9,473,444	6,380,981	1,651,734	1,654,189	462,602	19,622,950
COLUMBIA RIVER and OREGON							
Columbia River Packers Assn.	Newport	...	...	932	80	...	1,012
	Astoria	296,314	296,303	64,890	183,478	362,578	1,203,563
New England Fish Co.	Astoria and Kalama	41,000	119,000	71,000	1,300,000	202,000	1,733,000
Portland Fish Co.	Portland	52,169	110,327	820	19,162	62,803	245,281
San Juan Fishing & Packing Co.	Warrenton	...	105,000	67,200	679,700	48,700	900,600
Sebastian-Stuart Fish Co.	Astoria	...	...	...	200,000	...	200,000
Total Oregon		389,483	630,630	204,842	2,382,420	676,081	4,283,456
CALIFORNIA							
Tom Lazio Fish Co.	Eureka	11,558	102,624	107,691	582,452	...	804,325
Miscellaneous		79,099	599,932	64,668	1,455,313	2,623,447	4,822,459
Total California		90,657	702,556	172,359	2,037,765	2,623,447	5,626,784
Grand Total		47,895,545	28,145,986	5,706,589	11,584,046	5,016,990	98,349,156

DIAMOND ICE AND STORAGE CO.

FISH FREEZING A SPECIALTY — GENERAL COLD STORAGE

Western and Union
Telephone: EL. 1290
SEATTLE 1, WASH.


BOOTH
OYSTERS
BOOTH
COD
BOOTH
HALIBUT
BOOTH
SCALLOPS
BOOTH
HADDOCK
BOOTH
OCEAN PERCH
BOOTH
FLOUNDER
BOOTH
BREADED SHRIMP
BOOTH
SOLE

Over 9 carloads of fish are sold by BOOTH every single shopping day of the year. Approximately 300,000 lbs. per day! And mostly *repeat* business! You, too, can sell more fish. Sell BOOTH, the best Seller! ——

FAMOUS
BOOTH
FOODS

did you know? . . .

Mrs. America Buys 9 Carloads of Booth Fish every shopping day of the year

Over 419 ways to profit in the Booth *complete* line. Every item backed by 105 years of reliable *quality* — convenient *service!*

Prices on request

All packages attractively printed in natural color

"Sell the BEST — Sell BOOTH"

BOOTH FISHERIES CORPORATION

Address all inquiries to general offices, 309 West Jackson Blvd., Chicago 6, Illinois Founded 1848

PACIFIC FROZEN FISH

DISTRICT & YEAR	Halibut Pounds	Salmon Pounds	Fillets Pounds	Sablefish Pounds	Miscellaneous Pounds	TOTALS & Years	DISTRICT & YEAR
1946						1946	1946
Alaska	14,966,616	12,036,956	30,000	4,519,989	2,075,530	33,629,091	Alaska
British Columbia	12,782,294	14,384,544	1,972,000	1,778,855	11,486,110	42,403,803	British Columbia
Puget Sound & Wash. Coast	8,050,947	6,388,388	3,895,400	1,714,185	2,807,240	22,856,160	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	555,884	4,373,849	4,511,986	416,003	3,147,126	13,004,848	Columbia Riv.& Ore. Coast
California	585,807	852,370	252,064	182,810	3,394,719	5,267,770	California
TOTAL, 1946	36,941,548	38,036,107	10,661,450	8,611,842	22,910,725	117,161,672	TOTAL, 1946
1947						1947	1947
Alaska	20,638,301	10,197,755	4,597	886,535	383,473	32,110,661	Alaska
British Columbia	14,930,795	13,583,850	1,057,828	729,492	6,357,106	36,659,071	British Columbia
Puget Sound & Wash. Coast	4,933,377	4,241,310	1,658,152	921,204	1,004,330	12,758,373	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	618,266	1,272,508	1,681,488	60,786	985,697	4,618,745	Columbia Riv.& Ore. Coast
California	1,173,863	632,681	52,876	35,895	3,930,147	5,825,462	California
TOTAL, 1947	42,294,602	29,928,104	4,454,941	2,633,912	12,660,753	91,972,312	TOTAL, 1947
1948						1948	1948
Alaska	26,020,134	9,582,232	165,370	5,065,056	5,290	40,838,082	Alaska
British Columbia	11,512,287	15,209,533	1,650,856	1,651,028	4,210,412	34,234,116	British Columbia
Puget Sound & Wash. Coast	7,152,574	4,355,399	2,393,487	1,519,514	797,882	16,218,856	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	410,091	1,187,802	4,241,705	329,857	. . . .	6,169,455	Columbia Riv.& Ore. Coast
California	3,365	41,200	168,167	4,834	1,728,963	1,946,429	California
TOTAL, 1948	45,098,451	30,376,166	8,619,585	8,570,289	6,742,547	99,407,038	TOTAL, 1948
1949						1949	1949
Alaska	20,914,221	12,222,337	1,309	3,772,851	271,901	37,182,619	Alaska
British Columbia	12,629,300	19,584,100	3,480,500	1,967,500	6,946,700	44,608,100	British Columbia
Puget Sound & Wash. Coast	7,535,497	5,123,763	1,192,440	1,846,314	1,088,490	16,786,504	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	324,527	458,280	2,567,863	289,205	121,994	3,761,869	Columbia Riv.& Ore. Coast
California	5,912	124,301	790,780	6,547	3,083,428	4,010,968	California
TOTAL, 1949	41,409,457	37,512,781	8,032,892	7,882,417	11,512,513	106,350,060	TOTAL, 1949
1950						1950	1950
Alaska	25,625,940	8,467,426	5,113	566,965	98,409	34,763,853	Alaska
British Columbia	15,081,000	23,425,000	701,789	271,848	5,393,954	44,873,591	British Columbia
Puget Sound & Wash. Coast	6,270,705	4,706,925	1,166,019	1,547,807	5,226,430	18,917,886	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	417,651	483,068	3,383,682	63,081	333,117	4,679,599	Columbia Riv.& Ore. Coast
California	60,000	147,753	1,897,253	57,125	2,646,797	4,754,928	California
TOTAL, 1950	47,401,296	37,230,172	7,152,856	2,506,826	13,698,707	107,989,857	TOTAL, 1950
1951						1951	1951
Alaska	19,577,948	8,780,110	6,988	3,241,556	820,473	32,427,075	Alaska
British Columbia	13,358,332	16,000,909	2,292,931	1,050,718	7,492,483	40,195,373	British Columbia
Puget Sound & Wash. Coast	7,789,536	4,314,516	2,119,910	1,791,000	2,275,577	18,290,539	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	291,936	735,305	3,199,153	189,694	124,761	4,540,849	Columbia Riv.& Ore. Coast
California	14,690	172,706	253,169	8,445	2,503,039	2,952,049	California
TOTAL, 1951	41,032,442	30,003,546	7,872,151	6,281,413	13,216,333	98,405,885	TOTAL, 1951
1952						1952	1952
Alaska	17,341,747	5,327,279	8,977	988,520	205,955	23,872,478	Alaska
British Columbia	12,992,587	17,351,803	7,418,334	883,769	3,720,635	42,367,128	British Columbia
Puget Sound & Wash. Coast	8,345,650	5,532,676	3,004,786	1,661,919	751,310	19,296,341	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	219,223	1,157,484	3,827,761	166,072	136,084	5,506,624	Columbia Riv.& Ore. Coast
California	8,676	448,647	1,907,142	72,671	4,134,131	6,571,267	California
TOTAL, 1952	38,907,883	29,817,889	16,167,000	3,772,951	8,948,115	97,613,838	TOTAL, 1952
1953							1953
Alaska	19,727,501	6,399,247	46,675	2,599,418	730,465	29,503,306	Alaska
British Columbia	18,214,460	14,032,572	5,462,997	1,078,236	524,395	39,312,660	British Columbia
Puget Sound & Wash. Coast	9,473,444	6,380,981	1,654,189	1,651,734	462,602	19,622,950	Puget Sound & Wash. Coast
Columbia River & Ore. Coast	389,483	630,630	2,382,420	204,842	676,081	4,283,456	Columbia Riv. & Ore. Coast
California	90,657	702,556	2,037,765	172,359	2,623,447	5,626,784	California
TOTAL, 1953	47,895,545	28,145,986	11,584,046	5,706,589	5,016,990	98,349,156	TOTAL, 1953

NOTE:– Since 1942 Steelheads have been combined with salmon. Figures given in this column cover the quantities of frozen fillets of all varieties of fish reported. British Columbia figures include only amounts directly reported by owners of the fish and do not include unreported quantities in custom freezers.

1953-ALASKA CUSTOM COLD STORAGE FREEZINGS-1953

Company	Location	Halibut (Pounds)	Salmon (Pounds)	Sablefish (Pounds)	Fillets (Pounds)	Miscellaneous (Pounds)	Grand Total (Pounds)
Aleutian Cold Storage Co. 9	Sand Point	1,027,209	...	...	...	...	1,027,209
Cordova Fish & Cold Storage Co.	Cordova	689,097	...	...	...	...	689,097
Juneau Cold Storage Co.	Juneau	1,705,222	1,117,033	412,366	...	557,060	3,791,681
Ketchikan Cold Storage Co.	Ketchikan	2,300,000	382,000	75,500	...	...	2,757,500
Pelican Cold Storage Co.	Pelican City	2,815,759	1,968,013	137,616	...	110,082	5,031,470
Petersburg Cold Storage Co.	Petersburg	1,904,277	245,724	714,135	44,475	12,564	2,921,175
Sitka Cold Storage Co.	Sitka	1,671,491	697,058	141,060	...	55,523	2,565,132
Wrangell Cold Storage Co.	Wrangell	375,446	279,581	94,741	...	...	749,768
TOTAL		12,488,501	4,689,409	1,575,418	44,475	735,229	19,533,032

PACIFIC COAST FROZEN FISH

YEAR	Halibut	Salmon	Steelhead & Fillets	Sablefish	Miscellaneous	TOTAL	YEAR
	(Pounds)						
1928	20,180,501	23,522,228	1,736,900	3,037,875	3,147,845	51,625,349	1928
1929	23,192,029	20,285,535	1,989,936	2,467,317	3,881,054	51,815,871	1929
1930	21,262,804	20,142,524	1,795,703	3,706,823	4,377,468	51,285,322	1930
1931	19,274,638	18,706,304	1,787,279	2,065,327	3,317,959	45,151,507	1931
1932	14,943,916	19,099,265	1,084,689	1,904,579	1,828,499	38,860,948	1932
1933	21,197,099	21,101,484	1,368,364	1,851,856	2,620,049	48,138,852	1933
1934	25,010,373	25,181,600	1,082,339	2,354,183	3,731,735	57,360,230	1934
1935	22,193,028	27,979,608	695,447	4,158,382	4,288,100	59,314,565	1935
1936	24,483,127	24,168,556	888,677	3,817,582	3,849,238	57,202,180	1936
1937	25,611,959	28,809,866	723,857	5,964,158	4,227,376	65,337,216	1937
1938	26,290,123	29,019,550	794,183	4,608,638	6,091,588	66,804,082	1938
1939	27,884,761	19,812,999	544,865	5,036,206	6,313,548	59,592,379	1939
1940	30,989,043	25,106,033	281,986	5,339,661	8,207,464	69,924,187	1940
1941	32,267,665	23,961,770	93,541	5,019,374	10,963,419	72,305,769	1941
1942	32,334,253	26,256,142	249,336	7,983,957	16,986,000	83,809,688	1942
1943	25,882,523	25,930,418	4,447,875	7,546,624	20,223,179	84,030,619	1943
1944	37,668,595	31,748,145	9,199,424	9,777,304	17,200,082	105,593,550	1944
1945	36,879,253	44,991,950	8,115,197	8,552,441	30,774,204	129,313,045	1945
1946	36,941,548	38,036,107	10,661,450	8,611,842	22,910,725	117,161,672	1946
1947	42,294,602	29,928,104	4,454,941	2,633,912	12,660,753	91,972,312	1947
1948	45,098,451	30,376,166	8,619,585	8,570,289	20,778,163	113,432,654	1948
1949	40,286,125	34,294,242	6,394,213	7,740,630	9,479,721	98,194,931	1949
1950	47,401,296	37,230,172	7,152,856	2,506,826	13,698,707	107,989,857	1950
1951	41,032,442	30,003,546	7,872,151	6,281,413	13,216,333	98,405,885	1951
1952	38,907,883	29,817,889	16,167,000	3,772,951	8,948,115	97,613,838	1952
1953	47,895,545	28,145,986	11,584,046	5,706,589	5,016,990	98,349,156	1953

Note:-Since 1942 Steelheads have been combined with Salmon. Figures given in this column for years after 1942 cover the quantities of frozen fillets of all varieties of fish reported. Data in this table based on individual reports of principals and custom storages to this journal.

FILLET IMPORTS BY COUNTRIES

Year	Canada	Iceland	Denmark	Norway	England	Germany	Netherlands	Newfoundland*	Greenland	Miscellaneous	TOTAL
	(POUNDS)										
1946	38,950,523	4,720,618	2,150	1,756	47	...	...	5,899,856	...	14	49,574,964
1947	24,707,690	2,579,882	...	...	...	...	...	6,231,920	...	...	33,519,492
1948	49,140,150	4,181,204	9,352	395,109	...	...	...	...	...	40	54,277,438
1949	42,458,711	4,111,983	...	437,983	...	...	20,845	...	...	747,150	47,776,672
1950	50,192,442	13,061,922	580,123	2,085,184	74,123	14,091	13,206	...	239,100	4,413	66,264,604
1951	57,742,243	24,713,273	244,295	3,912,309	263,144	406,670	263,719	...	147,950	1,405	87,695,008
1952	54,807,347	35,487,432	2,369,412	10,540,748	1,612,407	1,439,391	1,355,264	...	132,800	57,636	107,802,447
1953	56,148,903	23,313,561	182,812	3,806,695	122,660	1,397,134	266,721	...	...	388,864	85,627,350

*Newfoundland figures are included with Canada's, following its annexation by Canada in 1949. 1953 figures for eleven months only.

BORNSTEIN Seafoods INC.

Bellingham, Wash.

Packers of

Quick Frozen Filets of

PACIFIC OCEAN PERCH

◆

RED ROCK COD

◆

LING COD

◆

FLOUNDER

◆

HALIBUT

◆

SALMON

◆

SOLE

◆

COD

EARDLEY FISHERIES COMPANY INC.

"EARDLEY" BRAND FILLETS & STEAKS

ALL VARIETIES OF PACIFIC COAST FRESH AND FROZEN FISH

Pier "62", Seattle 1, Washington
Seneca 0755

pounds frozen established a new record for halibut freezing. This figure topped the former record of 47.4 million pounds of halibut frozen in 1950.

Salmon freezing continued at the approximate level of the two preceding years, which represented a material decrease from the 1949 and 1950 volume. It is quite possible that a substantial portion of the decline in salmon freezing is involved in the packaged or "fillet" category, into which an increasing quantity of the frozen salmon seems to have gone in recent years.

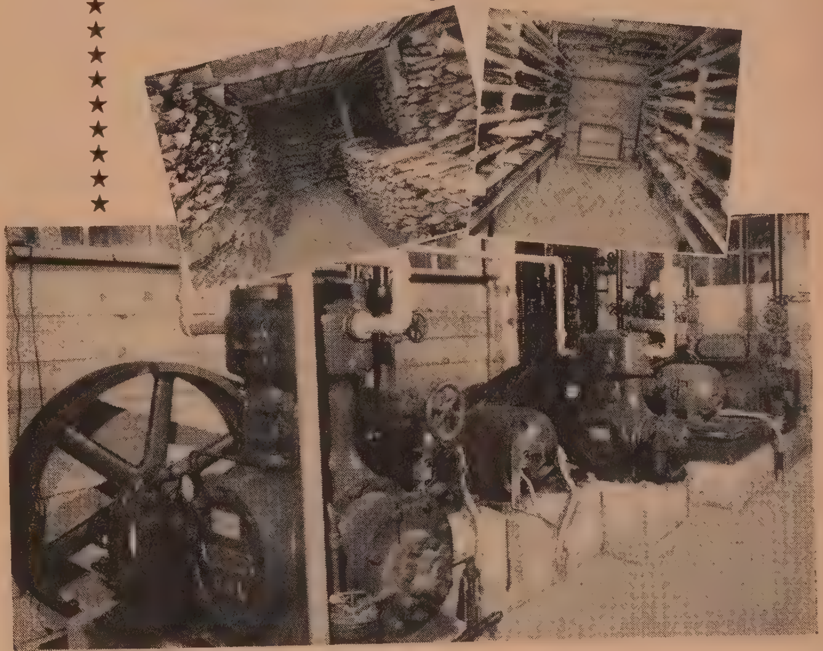
Fillets were definitely down from the year before, but with that exception ran far above the volume of any previous post-war year.

Shrinkage in fillet volume might readily be ascribed to imports, but

1953—OREGON TRAWL FISH LANDINGS—1953

SPECIES	Oct. '52	Nov. '52	Dec. '52	Jan. '53	Feb.	March	April	May	June	July	Aug.	Sept.	Total
Sole													
Petrale	101,120	22,711	7,581	415	42,735	90,744	122,236	46,538	141,028	175,680	227,710	50,080	1,028,578
English	276,613	54,356	10,888	3,564	94,780	134,846	179,819	144,716	267,963	236,653	162,524	217,587	1,784,309
Dover	630,671	143,686	9,338	...	...	...	3,651	112,744	530,457	659,104	667,482	389,576	3,146,709
Rex	92,963	19,458	6,882	3,000	53,955	85,609	113,580	78,211	167,328	247,697	295,715	155,355	1,319,753
Turbot	29,000	9,700	2,800	2,730	5,000	36,000	105,150	121,250	179,265	168,257	108,503	77,266	844,921
Miscellaneous	36,000	12,088	8,743	396	10,083	23,000	51,925	97,005	76,204	97,806	131,597	125,228	670,075
Total Sole	1,166,367	261,999	46,232	10,105	206,553	370,199	576,361	600,464	1,362,245	1,585,197	1,593,531	1,015,092	8,794,345
Flounders	35,766	20,028	18,584	3,445	20,613	676	3,260	118,749	13,926	5,686	58,162	18,396	317,291
Cod — Misc.	47,669	10,003	255	...	26,681	4,457	5,897	14,814	50,961	62,121	88,479	76,221	387,558
Lingcod	31,542	9,492	1,838	402	24,522	20,995	42,141	9,532	40,666	42,307	59,385	32,525	315,347
Rockfish	322,479	167,007	52,006	39,453	194,631	271,136	366,278	120,261	300,320	402,791	343,560	380,786	2,960,708
Ocean Perch	698,634	198,781	7,778	...	930	13,728	79,939	283,369	1,031,920	382,547	306,753	276,817	3,281,196
Grand Total	2,302,457	667,310	126,693	53,405	473,930	681,191	1,073,876	1,147,189	2,800,038	2,480,649	2,449,870	1,799,837	16,056,445

★★★★★★★★★★★★★★★★★★★
In Ketchikan, Alaska, It's VILTER Again
at
E. C. PHILLIPS and SON



★★★★★★★★★★★

● You'll find a Vilter installation at E. C. Phillips & Son in Ketchikan that's as modern as they come. Phillips freezes and stores big fish in a big way . . . and their new Vilter equipment helps them do it quickly and economically.

Two Vilter vertical compressors handle the normal storage cooling load, operating completely automatically, with one or both compressors operating as they are needed. During the season, a Vilter VMC booster gives them the cooling they need to freeze a full load of fish in the freezing room each 24 hours. After freezing, incidentally, the fish are glazed with ice and then sprayed at intervals during storage with water to renew the glaze.

Vilter refrigeration is helping to freeze and store fish in virtually every major fishing port around the world. Often there's a Vilter freezing plant or a Vilter PakIcer right on the fishing boat. Vilter is a favorite of fisheries because they know that operating costs are less, upkeep is lower, and trouble almost unknown with dependable Vilter refrigeration.

This equipment was distributed by W. E. STONE & CO., Seattle, Washington

WRITE FOR BULLETINS 120, 202, 206, 223

Vilter®

Let your nearest Vilter Representative or distributor show you how you can save with Vilter.

REFRIGERATION and AIR CONDITIONING

THE VILTER MANUFACTURING COMPANY, MILWAUKEE 7, WIS.
Air Conditioning • Ammonia & Freon Compressors • Booster Compressors • Baudelot Coolers • Double Pipe Coolers • Blast Freezers • Evaporative & Shell & Tube Condensers • PakIcers • Pipe Coils • Valves & Fittings

SEAFROST
BRAND
HALIBUT Frozen SALMON
CAUGHT BY AMERICAN FISHERMEN IN THE GLACIER CHILLED WATERS OF THE NORTH PACIFIC OCEAN
Selected Quick Frozen
AND DISTRIBUTED BY
McCALLUM-LEGAZ FISH CO., INC. PIER 67 SEATTLE WASH.

Home of

SEAFROST

Seafoods

Wholesale Dealers

FRESH · FROZEN

PICKLED · SMOKED

PACIFIC COAST FISH

NORTH PACIFIC MILD CURED SALMON

McCALLUM-LEGAZ FISH CO., INC.

Phone: EL 5125
TELETYPE: SE 79

PIER 67, SEATTLE 1, WASHINGTON

CABLE ADDRESS: COAST PACK

MAIN FISH CO., Inc.

Wholesale Fish Dealers

●

FIRST QUALITY

Fillets of Sole, Flounder, Cod of all species

SUPPLIERS TO THE TRADE

Widest variety of Pacific Coast and imported sea foods

PIER 49

Phone - - - - EL. 8396
Teletype, SEATTLE 165

SEATTLE 4, WASH.

it is noted significantly that fillet freezing in British Columbia dropped in about the same proportion as in Washington and Oregon. Canadian fillet volume ran far beyond that of any year prior to 1952.

Although continuing short of its former records, Alaska recovered handily in 1953, going nearly 6 million pounds higher, halibut, salmon and sablefish all sharing in the gain.

Sablefish, notably an up-and-down item in fish freezing, was on one of its upward swings in 1953, topping off at 5.7 million pounds, with Alaska far out in front as a center of production.

Shellfish Freezing Grows With Technology and Selling

Technological advance, backed by noteworthy market extension, in 1953

1953 - Weighted Average Shellfish Prices at Seattle - 1953

SPECIES	Unit	Dec. '52	Jan. '53	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Clams:													
Butter	Lbs.	$ 0.08	$ 0.06	$ 0.07	$ 0.07	$ 0.07	...	...	...	...	...	$ 0.10	$ 0.10
Razor	Lbs.	...	...	...	0.26	0.26	$ 0.29	$ 0.26	...	...	...	...	...
Little Neck	Lbs.	0.13	0.13	0.13	0.13	0.13	0.13	...	...	...	...	0.13	0.13
Clammeat	Lbs.	0.45	0.45	0.45	0.45	...	...	0.42	...	...	...	0.42	...
Crabs, Dungeness, cooked	Lbs.	0.29	0.26	0.26	0.26	0.26	0.26	0.26	...	...	...	0.26	0.26
Crabs, Ocean	Doz.	3.50	3.50	3.50	3.50	3.50	3.50	3.50	$ 3.50	...	...	...	...
Crabs, Puget Sound	Doz.	3.50	3.50	1.20	...	...	...	...	...	...	...	2.65	2.65
Crabmeat	Lbs.	1.25	1.27	1.20	1.20	1.20	1.22	1.25	1.30	$ 1.22	...	1.15	...
Octopus	Lbs.	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	$ 0.05	0.05	0.05
Oysters:													
Olympia	Gal.	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
Pacific	Gal.	4.25	4.50	3.50	3.50	3.50	3.50	3.50	3.50	...	3.50	3.90	3.90
Coast	Gal.	4.25	4.50	. .	3.50	3.50	3.50	3.50	3.50	...	3.50	3.90	3.90
Shrimp, local	Gal	...	...	...	...	0.45	0.45	...	...	...	...	...	...

Washington Eulachon Smelt Catches

YEAR	(Pounds) Cowlitz River	Grays River	Lewis River	Columbia River	TOTAL
1939	1,012,730	30,300	1,342,675	184,348	2,570,053
1940	730,170	60,450	1,341,250	384,650	2,516,520
1941	1,794,233	....	376,975	42,919	2,214,127
1942	1,570,915	51,750	....	54,325	1,676,990
1943	2,973,340	3,675	270,375	124,500	3,371,790
1944	1,125,674	10,900	504,000	249,522	**1,942,771
1945	2,048,438	42,753	1,552,770	215,040	*3,891,463
1946	2,674,040	300	....	51,099	2,725,439
1947	1,192,663	....	....	128,280	1,320,943
1948	2,197,810	....	547,590	296,240	3,041,640
1949	750	250	1,940,850	387,701	2,329,551
1950	31,320	11,600	557,157	379,730	***980,832
1951	....	......	1,050	649,838	†651,268
1952	377,754	......	.....	400,747	††796,309
1953	795,368	15,555	.....	207,409	‡1,021,132

* Includes 32,462 pounds caught in the Kalama River. *** Includes 1,025 pounds taken in Kalama River.
** Includes 44,300 lbs. from Kalama River; 7,675 lbs. from Naselle River; & 700 lbs. from Nemah River.
† Includes 380 pounds taken in Kalama River. †† Includes 17,808 pounds taken in Kalama River.
‡ Includes 2,800 lbs. taken in Kalama River.

You Can Depend on Mathews Conveyers...

to speed up processing—maintain continuous material runs

- Now is the time to replace obsolete methods with modern Mathews Conveyer Systems. You can eliminate slow, expensive operations with Case Handling Conveyers. Processing is speeded up, and stops, slowdowns and down-time are held to a minimum.

Let engineers from our modern West Coast Plant show you how others have cut processing costs with Mathews Conveying equipment and material handling planning. Write or wire today.

OVERHEAD TROLLEY CONVEYERS MOVE FILLETS THROUGH PROCESSING AND PACKING.

MATHEWS CONVEYER COMPANY WEST COAST

MAIN OFFICE AND FACTORY: SAN CARLOS, CALIF.

BRANCH OFFICES

PORTLAND 1
1128 S. W. Market St.

SEATTLE 1
2615 Western Ave.
Seneca 5718

LOS ANGELES 28
5527 Sunset Boulevard

For 56 Years
CINCOTTA BROS.
has brought YOU the

BEST in Fishing Supplies and Equipment

Distributors of:

- Galvicon Cold Galvanizing Compound
- Gold Medal Netting
- Gold Medal Made-Up Trawl Nets
- Gold Medal Seine Twine
- Cotton Rope
- Plymouth Rope
- American Marine Paints
- Perko Marine Hardware
- Deck and Seam Compounds
- Waterproof Clothing
- Sockeye Rubber Boots
- Marine Products Pumps
- Jabsco Pumps
- Marine Radios and Transmitters
- Danforth and Northill Anchors
- Trolling Gurdies
- Tools
- Bethanized Wire Rope
- Gates Vee Belts and Pulleys

CINCOTTA BROS.

169 Jefferson St., San Francisco, Calif.
203 Alvarado St., Monterey, Calif.

The Leader!

PEARL BRAND
GENUINE CODFISH

Proven Consumer Acceptance

PEARL BRAND
GENUINE CODFISH
UNION FISH CO. SAN FRANCISCO

A Quality Product For
Over Fifty Years

UNION FISH CO.

141 CLAY ST. SAN FRANCISCO

Distributors and Exporters of
SALT CODFISH and OTHER SALTED,
FROZEN and CURED SEAFOODS

FISH

Fresh...
Cured...
Frozen...
Shellfish...

One of the Pacific Coast's Leading Producers, Operating Its Own Fleet of Trawlers, Is Ready to Serve You With the Finest of Sea Foods.

Consolidated Fisheries, Inc.

Phone: EXbrook 2-7012
425 Washington St. San Francisco 26

The Nations Largest Packers of Fine Smoked Salmon

Since 1921 the Lascco label has stood for the finest quality in Smoked and Spiced Fish Products.

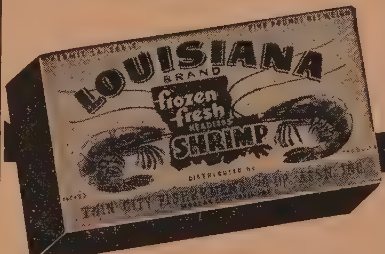
•

Quotations invited on all top quality fish products.

Lascco Brand

Los Angeles Smoking & Curing Co.

778 KOHLER ST. • LOS ANGELES • VA. 0724



Boat Fresh...

Louisiana Brand Shrimp come to you fresh frozen from the Gulf waters. For freshness, flavor and top quality order Louisiana Brand Shrimp now!

P. O. Box 809
Telephone 2681-2-3 Teletype MC 67

TWIN CITY FISHERMEN'S COOPERATIVE ASS'N., INC.
MORGAN CITY, LOUISIANA

pushed Pacific shellfish freezing to new peaks. The figures considered in this category do not include the Mexican frozen shrimp production, which is decidedly the largest item in shellfish freezing on the Pacific. Mexican shrimp freezing is discussed in detail in another department of this Yearbook, where the subject is combined with others making up the fisheries of Pacific Mexico.

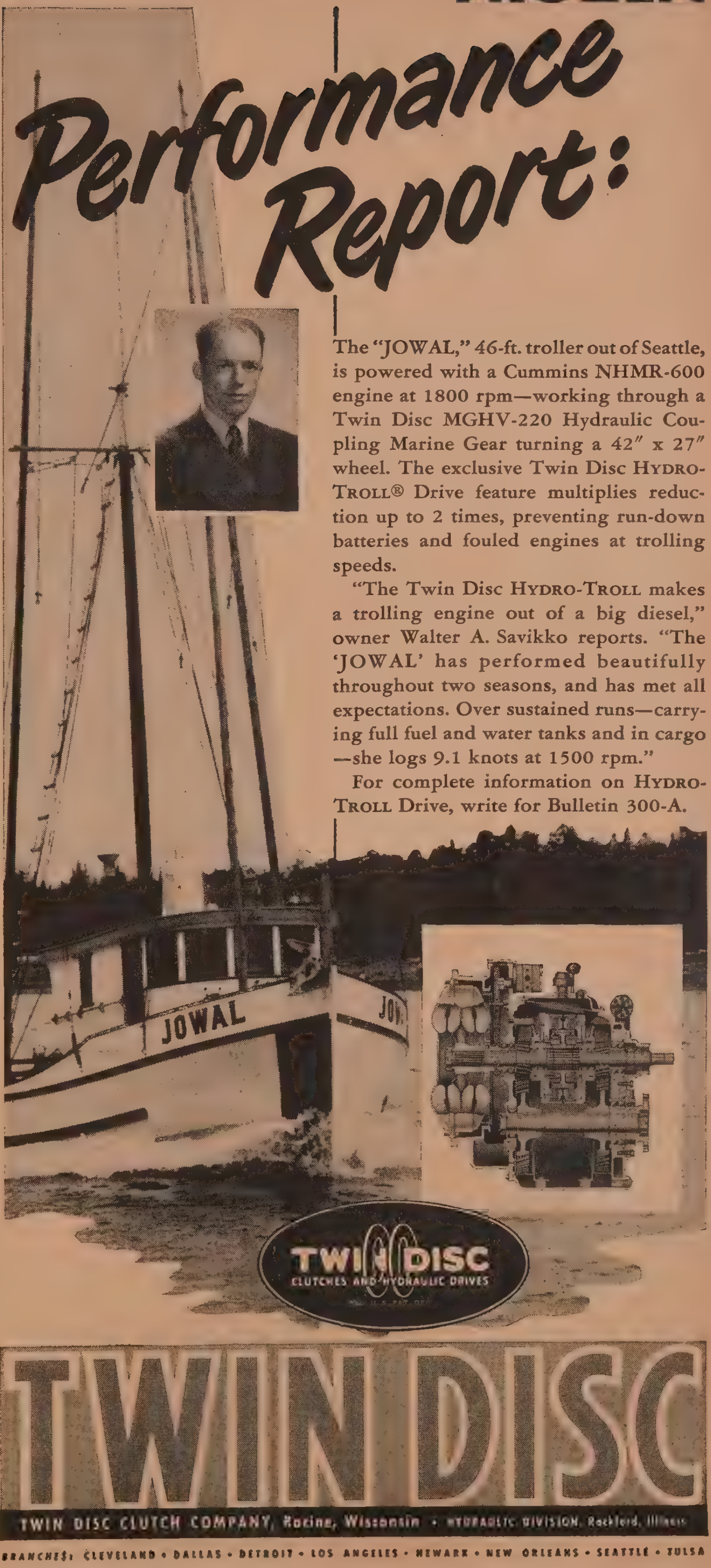
Shrimp meat reported in our frozen shellfish records and review if of the small, pink variety long marketed from Alaska, and currently being exploited in a limited way in British Columbia, Oregon and California waters where a new fishery for this species is developing.

King Crab Freezing Gains

Although there was only one com-

1953 - SAN DIEGO FRESH FISH LANDINGS - 1953

Species	Nov. '52	Dec. '52	Jan. '53	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Total
Barracuda	15,648	25,202	7,661	66,361	14,075	10,123	18,963	39,744	448	23	...	...	198,248
Halibut, California	9,322	...	...	85	16,544	...	878	281	...	21,115	18,843	10,622	77,690
Kingfish	...	...	...	340	...	...	...	...	...	742	2,694	...	3,776
Mackerel: Jack	...	...	...	...	...	598	253	30	813	...	...	...	1,694
Pacific	...	...	...	...	...	510	116	3,433	5,024	769	...	7,369	17,221
Rockfish	...	...	...	270	...	...	430	829	...	...	571	...	2,100
Sea Bass: Black	...	...	...	...	...	...	2,543	3,911	6,039	4,382	407	55	17,337
White	120	...	...	...	...	...	5,847	10,368	20,588	14,208	27,064	7,767	85,962
Sculpin	...	...	...	1,438	4,916	3,885	257	...	153	244	57	...	10,950
Shark	1,252	9,641	3,177	2,067	1,772	4,794	13,098	21,419	4,500	714	2,945	913	66,292
Swordfish	...	...	...	...	...	...	...	...	...	3,613	2,537	2,490	8,640
Tuna	3,167	...	...	...	...	...	...	54	15,904	...	...	...	19,125
Yellowtail	5,165	10,000	23,822	19,080	...	22,859	12,947	710	8,106	829	672	11,613	115,803
Miscellaneous	1,517	3,600	...	192	5,759	...	87	166	286	587	...	...	12,194
Total	36,191	48,443	34,660	89,833	43,066	42,769	55,419	80,945	61,861	47,226	55,790	40,829	637,032



Performance Report:

The "JOWAL," 46-ft. troller out of Seattle, is powered with a Cummins NHMR-600 engine at 1800 rpm—working through a Twin Disc MGHV-220 Hydraulic Coupling Marine Gear turning a 42" x 27" wheel. The exclusive Twin Disc HYDRO-TROLL® Drive feature multiplies reduction up to 2 times, preventing run-down batteries and fouled engines at trolling speeds.

"The Twin Disc HYDRO-TROLL makes a trolling engine out of a big diesel," owner Walter A. Savikko reports. "The 'JOWAL' has performed beautifully throughout two seasons, and has met all expectations. Over sustained runs—carrying full fuel and water tanks and in cargo—she logs 9.1 knots at 1500 rpm."

For complete information on HYDRO-TROLL Drive, write for Bulletin 300-A.

TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

Landings of Food Fish by the Otter Trawl Fleet at Seattle

YEAR	SOLE AND FLOUNDERS				Halibut	True Cod	Lingcod	Sablefish	Rockfish	Miscellaneous	TOTAL
	English Sole	Petrale Sole	Other Sole, Flounders, etc.	TOTAL							
1942	6,464,323	535,981	696,129	7,696,433	200,726	547,422	2,698,605	280,232	1,049,269	2,894	12,475,581
1943	1,573,683	5,128,222	3,238,493	9,940,398	371,044	587,816	4,141,374	708,607	3,279,122	26,839	19,055,200
1944	793,910	4,395,513	174,242	5,363,665	...	370,696	3,770,160	949,742	4,356,659	23,085	14,834,280
1945	805,134	4,701,704	436,653	5,943,591	...	1,697,462	3,319,058	231,367	12,940,910	...	24,132,388
1946	1,925,867	3,513,573	120,669	5,560,109	...	1,733,868	1,976,631	514,852	6,104,157	21,626	15,911,243
1947	1,429,125	2,636,464	382,815	4,448,404	...	975,852	1,628,928	385,639	3,197,306	50,176	10,686,315
1948	2,879,316	3,724,386	691,999	7,295,701	...	2,185,854	2,537,301	223,651	6,416,604	240,909	18,900,020
1949	2,581,584	2,959,506	102,817	5,643,907	...	1,882,427	1,655,878	243,243	8,013,142	4,189	17,442,786
1950	1,863,363	2,600,585	296,075	4,760,023	...	1,868,564	1,332,065	604,954	7,770,352	11,489	16,347,447
1951	2,530,910	2,097,030	875,914	5,503,854	...	3,293,315	1,049,306	665,493	6,312,702	...	16,824,670
1952	2,107,244	1,945,417	1,876,145	5,937,404	...	3,859,212	1,078,939	441,317	5,119,868	...	16,436,740
1953	952,539	1,350,066	949,194	3,251,799	...	3,143,768	712,159	213,331	1,777,662	...	9,098,719

Holdings of Frozen Halibut in Canada by Months

Year	(Pounds)												Yea
	Jan.	Feb.	March	April	May	June	July	August	September	October	November	December	
1943	5,033,262	4,320,016	3,662,970	2,023,376	1,678,527	3,113,646	4,822,529	4,874,661	4,971,853,	3,715,845	4,136,536	3,494,191	194
1944	2,503,628	2,039,395	1,507,225	1,097,699	792,549	728,024	3,905,781	6,675,093	6,368,948	6,354,092	5,392,449	4,861,059	194
1945	4,222,080	2,970,513	2,605,945	1,596,132	1,193,618	4,430,285	7,065,500	6,462,794	6,146,324	5,305,732	4,538,808	2,874,540	194
1946	2,348,945	1,472,192	1,188,634	717,256	237,978	5,499,251	9,561,055	9,260,311	9,366,369	8,076,480	7,067,600	6,298,440	194
1947	5,479,805	4,176,190	3,592,122	2,680,602	1,282,144	7,140,603	10,209,201	11,994,470	13,411,286	11,517,561	9,836,666	9,080,400	194
1948	8,296,000	6,613,000	5,254,000	3,348,000	2,312,000	9,108,000	10,717,000	11,216,000	9,362,000	8,610,000	7,418,000	5,687,000	194
1949	4,749,000	3,949,000	2,867,000	1,017,000	445,000	7,972,000	9,959,000	11,957,000	10,792,000	9,523,000	8,463,000	6,781,000	194
1950	5,346,000	3,250,000	2,162,000	1,116,000	689,000	7,329,000	10,755,000	11,273,000	10,428,000	8,475,000	8,429,000	7,020,000	195
1951	6,450,000	5,398,000	4,349,000	2,725,000	2,433,000	13,198,000	14,452,000	13,550,000	13,445,000	12,883,000	10,791,000	9,212,000	19
1952	7,433,000	5,098,000	3,747,000	2,367,000	1,449,000	7,662,000	12,129,000	13,420,000	12,544,000	12,569,000	10,439,000	8,077,000	19
1953	7,797,000	5,448,000	3,787,000	2,429,000	1,472,000	7,459,000	14,997,000	15,346,000	16,983,000	14,634,000	‡	‡	19

‡ Data not available. NOTE: All figures in accordance with latest reports. Source: Dominion Bureau of Statistics — Ottawa, Canada.

JOHN NAGLE CO.

Receivers of

FRESH AND FROZEN FISH

BOSTON, MASSACHUSETTS

J. W. NICHOLLS CO. LTD.

995 East Cordova St.
Vancouver 4, B. C.
Canada

wholesale fish dealers
importers of fish products

Tam-o'-Shanter Brand

RESIDENT ALASKA BUYERS

Quality Salmon, Halibut and Sable for the Account of Wholesale Fish Dealers Chicago, New York, Pittsburgh, Seattle.

ENGSTROM BROS.
Commission Agents

Elton E. Engstrom
P.O. Box 723
Juneau, Alaska

L. A. Engstrom
Wrangell
Alaska

John Heuelsen
Pelican
Alaska

MORLEY SALES CO.
FROZEN FISH BROKERS
188 W. Randolph St. Chicago 1, Ill.
SELLING FROZEN FISH
Since 1930
JERRY SLAVIK, Mgr.

Dudley Slocum & Co., Inc.
220 East 42nd Street, New York 17, N. Y.
MUrray Hill 2-0920
FROZEN FOOD BROKERS

pany engaged in ocean fishing for King crab in 1953, this operation worked three trawlers and put up a very substantial pack. The overall production of frozen King crab was greatly increased by developments in Cook Inlet, where a substantial population was discovered in 1953, supporting an active fishery centered at Seldovia. Other King crab fishing operations along the Pacific coast of mainland Alaska and in the waters of Kodiak Island yielded to a substantial degree and attracted the attention of American operators, as these fisheries are almost altogether in territorial waters and thus are not subject to the competitive fishing of the Japanese operations which returned to Bering Sea in 1953 in force.

1953-Coastwise Receipts at Seattle from Alaska-1953

SPECIES	Pounds													
	Dec. '52	Jan. '53	February	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.	NOV.	12 Months Total	Total 1952
Halibut	...	...	...	...	...	...	130,000	...	...	...	...	...	130,000	15,836
Halibut, frozen	1,008,763	293,071	1,335,613	991,251	489,798	5,537	529,035	1,353,164	1,207,719	856,998	1,152,130	703,231	9,926,310	13,350,708
Herring, frozen	...	...	3,500	...	...	6,500	1,500	1,500	...	...	...	...	13,000	49,000
Sablefish, frozen	127,550	48,292	41,550	40,820	56,293	31,250	10,660	46,560	42,511	82,487	26,200	92,910	647,083	1,053,020
Salmon:														
Chinook	...	...	...	10,827	...	15,979	23,057	...	...	...	...	1,500	51,363	201,377
Chinook, frozen	86,569	73,908	23,035	41,660	26,202	27,752	53,362	187,566	124,517	83,182	6,800	112,091	846,644	1,498,427
Chum, frozen	31,231	...	...	...	42,755	...	...	...	100	...	...	33,574	107,660	92,911
Pink, frozen	...	...	...	...	...	...	...	...	194,000	...	8,683	...	202,683	53,621
Silver, frozen	244,991	108,156	89,243	...	7,250	...	...	13,580	...	235,812	344,636	205,260	1,248,928	3,162,033
Sockeye, frozen	...	...	...	...	...	...	...	...	1,059,614	...	...	...	1,059,614	868,073
Fillets, frozen	...	...	...	2,505	...	...	...	...	...	...	...	...	2,505	40,646
Clammeat, frozen	...	...	...	...	15,110	...	...	...	...	...	...	...	15,110	
Crabs	...	...	...	...	...	...	...	51,000	...	44,000	...	...	95,000	
Crabs, frozen	48,955	...	2,140	1,313	161,500	...	...	20,165	30,491	2,800	...	2,150	269,514	192,375
Crabmeat, frozen	...	8,430	...	2,693	2,657	70,350	14,225	29,926	297,981	99,850	210,665	40,960	777,737	229,142
Shrimp, frozen	...	3,976	3,021	13,860	...	4,960	6,670	...	...	...	1,480	2,366	36,333	38,430
Shrimpmeat, frozen	47,150	44,337	41,129	36,390	22,490	34,670	43,357	30,184	12,180	22,390	24,200	41,040	399,517	358,485
Total Fresh	...	...	...	10,827	...	15,979	153,057	51,000	...	44,000	...	1,500	276,363	217,213
Total Frozen	1,595,209	580,170	1,539,231	1,130,492	824,055	181,019	658,809	1,682,645	2,969,113	1,383,519	1,774,794	1,233,582	15,552,638	20,986,871
GRAND TOTAL	1,595,209	580,170	1,539,231	1,141,319	824,055	196,998	811,866	1,733,645	2,969,113	1,427,519	1,744,794	1,235,082	15,829,001	21,204,084
Cured Fish														
Sablefish, salted Bbl.	...	...	...	...	...	...	.	144	52	12	129	4	341	64,000
Salmon, mild-cured Tcs.	115	15	16	14	42	310	1,033	982	470	211	86	49	3,343	2,632,575
Salmon, salted Bbl.	...	...	...	...	...	...	27	...	553	31	318	8	937	19,750
Livers, frozen														
Unclassified	7,534	...	1,084	1,997	...	...	52,488	119,391	8,400	19,212	8,080	4,438	222,624	383,801

1953 - FROZEN FILLETS-1953

	(Pounds)												
	Dec. 1952	January	Feb.	March	April	May	June	July	August	September	October	November	Total
Oregon:													
Cod, True	...	..	5,697	...	1,795	1,795	...	...	...	...	5,811	2,602	17,700
Lingcod	...	...	...	...	..	...	..	1,495	1,995	3,245	45	405	7,185
Ocean Perch	590	...	...	10,872	18,798	15,356	7,080	35,649	15,635	112,653	36,667	1,313	254,613
Rockfish	1,216	...	10,192	48	20,934	19,556	245	19,075	12,857	23,363	6,938	2,338	116,762
Sole: Incl. Flounder	5,711	...	81	2,904	3,254	800	195,345	152,815	175,077	80,177	15,908	5,675	637,747
Unclassified	...	...	...	...	..	.	52,104	..	...	...	..	...	52,104
Total Oregon	7,517	...	15,970	13,824	44,781	37,507	254,774	209,034	205,564	219,438	65,369	12,333	1,086,111
Washington:													
Cod, True	19,352	5,506	3,329	59,767	32,482	29,097	1,976	4,107	21,713	20,668	13,985	5,842	217,824
Lingcod	32,940	2,595	1,630	12,730	18,723	18,425	23,815	20,585	8,910	17,085	20,500	14,805	192,743
Ocean Perch	2,280	2,145	...	10,806	33,426	27,285	115,603	114,365	60,082	6,454	...	877	373,323
Rockfish	31,906	3,236	5,235	2,462	1,550	697	1,313	4,590	5,646	3,962	13,234	3,244	77,075
Sole: Incl. Flounder	23,231	47,585	50,430	36,307	12,952	2,070	45,132	33,385	44,990	73,405	9,635	10,794	389,916
Unclassified	...	...	.	.	. .	430	. .	810	...	...	...	...	1,240
Total Washington	109,709	61,067	60,624	122,072	99,133	78,004	187,839	177,842	141,341	121,574	57,354	35,562	1,252,121
Pacific Northwest Total	117,226	61,067	76,594	135,896	143,914	115,511	442,613	386,876	346,905	341,012	122,723	47,895	2,338,232

TOM LAZIO FISH CO., INC.

Producers and Wholesalers of
SHELTER COVE Brand
(Fancy California)

Humboldt Jumbo Crabs,
Crab Meat and Fillets,
Albacore-Tuna

Albacore and Drag Boat Fleet Tied-up at the Tom Lazio Fish Co., Eureka

SALMON - HALIBUT - SABLE FISH - MILD CURED SALMON

Branch
CRESCENT CITY
Phone: 6R33

Home Office—Plant—Cannery
EUREKA, CALIF.
Phone: Hillside 2-2981—Teletype: Eureka 80

Branch
SAN FRANCISCO
Phone: ORdway 3-5867

AMERICAN FREEZER CO.

FRESH and FROZEN SEA FOOD

BAIT SQUID
THE CRAB BAIT OF TODAY
Our Specialty

FANCY BLEACHED WHITE SQUID

SALMON and ALBACORE BUYERS

Receiving Station: Monterey
Municipal Wharf, No. 2
Phone 5-3915

Main Office
Del Monte Ave., Monterey
Phone 5-3116

Receiving Station: Moss Landing
Phone: Castroville 7112

BOYD-COLLINS CO.

SEAFOOD BROKERS

Representing

Reliable Producers and Shippers of Fresh, Frozen and Salted Fish, Shellfish and Fishery Products

•

110 Market St. San Francisco 11, Calif.

Phone YUkon 2-0900

Cable Address: Boydco TWX SF 1135

J. J. CAMILLO

Wholesale SEA FOOD Broker
935 W. Harbor Drive, SAN DIEGO 1, California
Maritime Agency
★ BROKER and AGENT ★
Phone Franklin 5189

CANNED SALMON & TUNA CRABMEAT

BROKERS

Covering Wholesale Trade, Chains, Supermarkets, Co-ops

TRUBENBACH & SCHEFFOLD, INC.
100 HUDSON ST., NEW YORK CITY 13, N.Y.
MEMBER NATIONAL FOOD BROKERS ASS'N.
1922 1954

F. ALIOTO FISH COMPANY

QUALITY NATIONWIDE SHIPPERS SERVICE

Wholesale Dealers in Fresh Fish, Shell Fish, Fish Livers, Mild Cured Salmon

535-539 Washington St. Phone YUkon 6-0340 San Francisco, California
Receiving Station: Ft. of Leavenworth St., San Francisco, Phone ORdway 3-5866
Branch at Fort Bragg, Calif. Phone Fort Bragg 2593

1953-CALIFORNIA FISH FREEZINGS-1953

(Pounds)

Species	Nov. '52	Dec. '52	Jan. '53	Feb.	March	April	May	June	July	August	Sept.	Oct.	Total
Bait & Animal Food	70,000	90,802	27,466	7,000	117,000	212,700	244,655	223,939	316,829	180,000	191,347	70,000	1,751,738
Fillets:													
Cod	260	2,256	588	...	...	2,290	4,160	...	2,222	1,637	113	...	13,526
Flounder	100	...	1,400	...	1,340	4,654	...	...	540	...	...	...	8,034
Lingcod	...	...	...	...	...	5,518	...	...	...	1,415	428	...	7,361
Mackerel	246	...	1,440	...	70,488	...	...	...	...	...	...	...	72,174
Ocean Perch (Pacific)	...	...	...	...	...	...	...	3,177	...	...	...	...	3,177
Rockfish	2,795	885	...	220	...	3,271	...	...	117	...	885	710	8,883
Sole	...	914	1,400	...	200	...	4,456	5,558	1,262	1,261	3,032	1,563	19,646
Other Fillets	206,852	100,817	54,404	41,343	29,378	65,736	68,900	253,042	317,382	345,393	236,465	185,252	1,904,964
Cod, etc.	...	...	...	...	2,542	...	560	3,682	...	190	...	...	6,974
Flounder, etc.	95	...	...	764	400	...	...	265	148	...	59	...	1,731
Herring, Sea	...	...	...	...	...	...	9,104	...	2,438	...	...	...	11,542
Halibut	...	...	...	...	...	...	...	88,458	43	2,156	...	...	90,657
Mackerel	32,180	7,085	11,690	19,442	32,740	72,549	18,411	22,233	39,470	28,537	38,439	22,476	345,252
Sablefish	13,494	1,245	...	...	...	1,972	1,178	18,297	40,281	46,686	25,903	23,303	172,359
Salmon:													
King or Chinook	...	...	...	...	...	2,023	7,485	23,187	209,436	279,666	97,931	10,832	630,560
Silver or Coho	780	...	...	...	...	...	...	...	4,100	5,482	1,226	...	11,588
Pink	...	...	...	...	...	...	...	600	9,415	16,365	4,565	...	30,945
Unclassified	...	...	...	...	...	...	...	1,060	19,791	...	156	8,456	29,463
Sea Bass	...	1,657	1,231	10,258	26,526	12,886	23,775	1,323	6,391	23,871	1,464	298	109,680
Smelt	...	...	...	2,540	...	4,736	2,240	...	...	960	21,632	...	32,108
Swordfish	...	...	...	...	...	1,764	...	...	...	...	9,904	844	12,512
Tuna	9,714	1,502	...	...	...	1,521	4,113	5,982	67,852	24,413	24,448	29,617	169,162
Unclassified	96,298	143,068	98,206	189,559	105,557	78,432	252,450	170,487	96,648	206,993	365,283	131,505	1,934,486
Total	432,814	350,231	197,825	271,126	386,171	470,052	641,487	821,290	1,134,365	1,165,025	1,023,280	484,856	7,378,522

WASHINGTON TRAWL LANDINGS

Year	Sole and Flounders	"Cod"	Lingcod	Sablefish	Rockfish	Miscellaneous	TOTAL	Year
1930	339,932	26,318	....	....	24	32,419	398,693	1930
1931	323,064	30,269	....	....	....	3,674	357,007	1931
1932	281,302	46,512	....	....	1,000	1,374	330,188	1932
1933	296,517	59,965	....	....	....	5,200	361,682	1933
1934	247,684	25,405	13,454	....	8,313	6,116	300,972	1934
1935	2,575,998	185,786	285,759	....	63,284	23,743	3,134,570	1935
1936	4,791,994	406,361	237,229	....	81,301	22,650	5,539,535	1936
1937	4,265,491	441,130	235,431	....	72,640	14,919	5,029,611	1937
1938	5,036,852	456,814	286,439	....	107,163	21,952	5,909,220	1938
1939	4,659,122	354,805	197,982	....	112,395	231,614	5,555,918	1939
1940	5,917,096	518,705	247,007	....	248,711	946,788	7,878,307	1940
1941	7,977,576	457,253	199,128	....	93,286	582,295	9,309,538	1941
1942	9,575,018	1,172,811	3,845,055	118,406	1,034,417	717,279	16,462,986	1942
1943	13,350,936	996,963	4,859,693	778,451	4,464,702	1,015,394	25,366,139	1943
1944	7,806,664	623,151	4,254,298	1,429,682	5,132,233	270,898	19,516,926	1944
1945	9,185,003	2,417,053	4,177,839	529,507	16,093,712	211,068	32,614,182	1945
1946	9,709,656	3,701,647	3,193,436	628,756	10,094,207	93,705	27,421,407	1946
1947	9,294,256	2,442,583	2,481,497	155,981	6,024,582	99,887	20,498,786	1947
1948	13,744,310	5,371,084	4,649,453	314,229	10,262,442	162,166	34,503,684	1948
1949	10,368,493	5,465,538	3,063,672	586,368	12,610,526	588,282	32,682,879	1949
1950	10,379.364	6.330.873	2.365.948	497.822	12.210.430	414.731	32.199.168	1950
1951	10,750,629	8,403,570	1,855,840	1,277,731	9,939,626	2,092,874	34,320,270	1951
1952	13,008,250	9,997,915	2,662,558	2,316,493	11,718,461†	2,988,991	42,692,668	1952
1953	12,113,053	9,452,631	2,691,041	2,186,401	10,326,421†	3,042,631	39,812,178	1953

† 1,695,589 Pacific Ocean Perch included in 1952 Rockfish total; 2,162,041 lbs Pacific Ocean Perch included in 1953 Rockfish total.

NOTE: — 1953 figures are complete through December 1, 1953, and include estimates for the balance of the year based on average otter trawl landings in December as shown in Washington Department of Fisheries records for the last three years.

SOUTHERN ROYAL
FROZEN FRESH
SHRIMP
FANCY TENDERIZED
Abalone
Southern Seas
Abalone
BREBES Fancy
ABALONE
PIERCE'S
BREBES Fancy
ABALONE

Packages that

NET PROFIT

... our colorful folding boxes catch sales

Paperbox Corporation
63RD & LOWELL ST. • OAKLAND 8, CALIF.
PHONE OLYMPIC 2-6655 • OLYMPIC 2-6656

FOLDING BOXES

Our package-design and art departments are always at your service to assist in creating your package.

FISH

OIL
MEAL
SOLUBLES

VITAMIN "A"

from

FOREIGN and DOMESTIC SOURCES

CHICAGO 3
105 W. Adams St.

NEW YORK 13
40 Worth St.

LOS ANGELES 15
Bendix Building

SEATTLE 4
Central Building

WILBUR-ELLIS COMPANY
OF CANADA, LTD.
614 West Pender Street, Vancouver, B. C.

WILBUR-ELLIS COMPANY

320 CALIFORNIA ST.
SAN FRANCISCO 4

CIA WILBUR-ELLIS PERUANA S. A.
Carabaya 831
LIMA, PERU

CIA WILBUR-ELLIS S. A.
Av. Pte. Roque Saenz Peng 852
BUENOS AIRES, ARGENTINA

WILBUR-ELLIS COMPANY (PTY) LTD.
813 Grand Parade Centre
CAPE TOWN, SOUTH AFRICA

OIL and MEAL

Although Pacific production of fish oil more than doubled in 1953 as compared with the preceding year, the fish reduction business as a whole continued to suffer from the failure of sardines in California and the lower level of abundance of Alaska herring.

Recovery in 1953 from the extremely low level of the year before was due to the return of activity in the British Columbia herring industry, which had lost the entire 1952-3 season in a dispute between fishermen and operators over price.

FISH REDUCTION returned in 1953 to the status of a primary commodity producer after being almost wholly on a by-product basis in 1952. The yield of 1953, with 5,323,000 gals of oil and 58,567 tons of fish meal, was far ahead of the previous year, but with that exception was the lowest since 1925.

Continued failure of the California sardine fishery was the principal factor in keeping fish oil and meal manufacture low; but in Alaska the herring business also was sharply depressed, with only two plants operating.

In British Columbia the herring industry once again got into operation in the summer and fall of 1953, although there was no fishing during the first quarter of the year. The entire 1952-3 season was lost in the British Columbia herring business because of the fishermen's insistence upon a price, and the fact that as they revised their ideas downward the level of the world market for fats and oils fell even faster.

By-Product Branch Important

As a matter of fact, the by-product business continued to be a highly important factor in oil and meal manu-

1953-Pacific Coast Fish Oil and Meal-1953

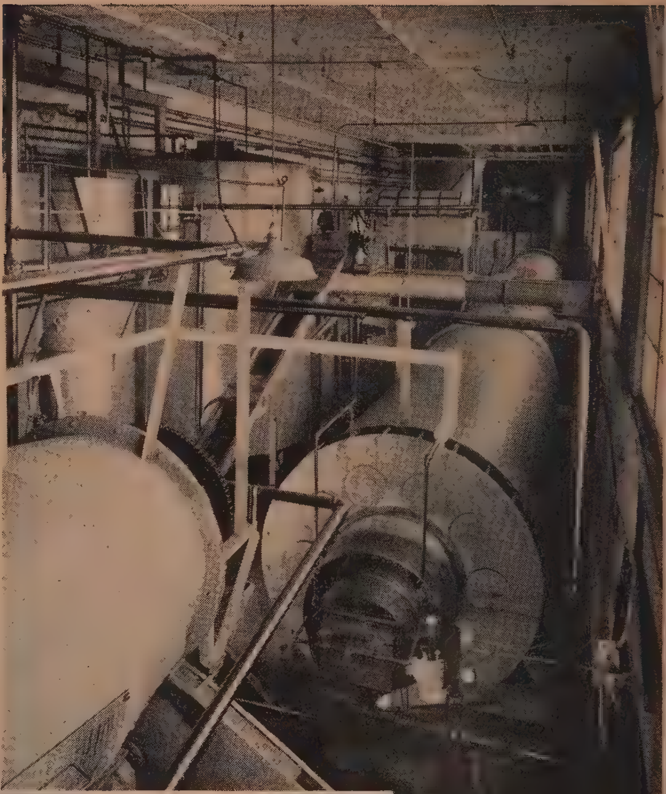
Regions and Districts	Fish Meal Tons	Herring Oil Gallons	Sardine or Pilchard Oil Gallons	Other Fish Oil Gallons	Total Fish Oil Gallons	Regions and Districts
ALASKA	2,544	427,555	...	73,158	500,713	ALASKA
BRITISH COLUMBIA	26,944	3,565,919	...	257,517	3,823,436	BRITISH COLUMBIA
WASHINGTON	2,690	...	...	169,000	169,000	WASHINGTON
OREGON	1,607	...	...	53,000	53,000	OREGON
CALIFORNIA	24,782	...	15,677	761,778	777,455	CALIFORNIA
GRAND TOTAL	58,567	3,993,474	15,677	1,314,453	5,323,604	GRAND TOTAL

California Fish Oil and Meal Production

YEAR	FISH MEAL, TONS					FISH OIL, GALLONS				
	San Francisco District	Monterey District	San Pedro District	San Diego District	TOTAL Tons	San Francisco District	Monterey District	San Pedro District	San Diego District	TOTAL Gallons
1930	3,375	13,752	13,653	4,859	35,639	747,931	3,769,950	1,282,893	41,989	5,842,763
1931	3,597	8,416	7,600	2,877	22,440	726,514	2,372,303	818,364	7,511	3,924,692
1932	2,435	12,560	9,846	2,659	27,500	426,831	3,378,929	1,293,961	25,678	5,125,399
1933	4,941	18,869	18,249	4,310	46,369	933,696	4,209,366	2,585,784	58,948	7,787,794
1934	11,138	34,492	27,236	4,858	77,724	2,490,156	9,322,080	4,221,447	94,525	16,128,208
1935	12,994	27,966	31,163	6,572	78,695	3,106,785	6,734,305	3,821,566	261,482	13,924,138
1936	24,593	30,431	23,588	7,655	86,267	5,626,422	6,756,541	2,834,887	260,059	15,477,909
1937	22,916	21,118	29,184	8,300	81,518	4,431,668	4,122,817	2,578,600	191,757	11,324,842
1938	31,773	25,202	24,209	6,732	87,916	7,032,792	4,753,160	2,126,661	130,606	14,043,219
1939	43,369	33,238	21,858	6,704	105,169	10,395,398	6,894,201	1,594,122	96,806	18,980,527
1940	21,256	28,004	29,542	7,335	86,137	4,831,500	5,745,120	2,509,291	129,079	13,214,990
1941	32,773	38,875	25,832	5,332	102,812	7,429,493	7,537,870	2,627,959	81,876	17,677,198
1942	17,748	25,170	31,633	4,452	79,003	4,183,492	5,219,441	3,146,680	137,027	12,686,640
1943	19,682	37,416	24,753	4,300	86,151	4,979,798	6,652,715	2,262,889	120,777	14,016,179
1944	24,452	42,452	34,945	5,283	107,132	5,722,966	8,509,678	3,903,785	133,356	18,269,785
1945	16,177	26,105	29,822	6,549	78,653	3,778,814	5,145,907	2,948,595	188,795	12,062,111
1946	1,597	6,572	36,859	7,867	52,895	72,089	922,103	3,641,810	266,623	4,902,625
1947	837	4,453	22,555	9,920	37,065	17,869	497,271	1,795,095	323,369	2,633,604
1948	371	8,061	24,677	11,341	44,450	20,382	924,048	1,529,447	354,320	2,833,197
1949	3,828	21,515	29,693	11,468	66,504	603,178	3,390,112	2,267,436	330,508	6,591,234
1950	3,448	8,101	48,157	11,063	70,769	534,691	1,343,801	4,950,373	373,265	7,202,130
1951	981	3,229	27,114	10,174	41,498	20,730	416,309	1,959,109	339,442	2,735,590
1952	1,423	1,968	24,224	5,709	33,324	52,850	267,117	580,592	192,433	1,092,992

NOTE: — This table includes all fish oil except vitamin oils from livers, and includes oil from fish plant offal as well as from whole fish. Meal figures include solid residuum recovered from stockwater. The San Francisco district as reported covers all California north of Monterey Bay.

Perfected **Low Temperature Drying of Fish Meal**

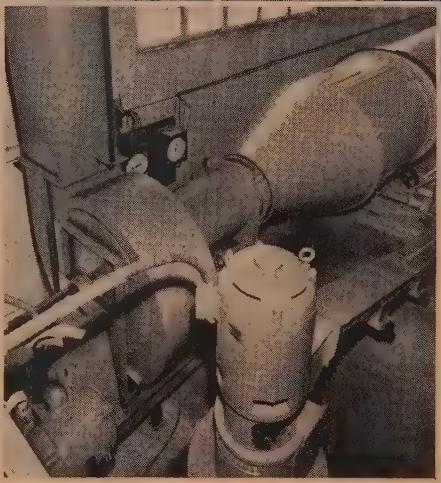


ANOTHER STANDARD FIRST

A new and more efficient method of drying fish meal! As you might expect, it is a *Standard* development. For Standard has maintained its position of leadership in the fish processing industry for nearly half a century by consistently being first with the latest.

2% TO 5% PROTEIN GAIN—2½% MEAL GAIN

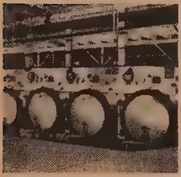
By actual laboratory tests, Standard's low temperature drying increases protein values at least 2% and yield of meal 2½%. Particles never heated above 160° F. — no scorching — no burnt odors. *Write today* for full descriptive literature on low temperature drying and Standard Fish Meal and Oil Plants, Fish Canneries, Component Parts. World-wide installation and service.



(Above) Standard Low Temperature Fish Meal Dryer in operation at Pan Pacific Fisheries, Inc., Terminal Island, California.

(Left) Dryer discharge end. All fish meal is removed from dryer through the fan for additional drying while being air-conveyed to cyclone.

World's Largest Designers and Fabricators of Complete Fish Processing Equipment

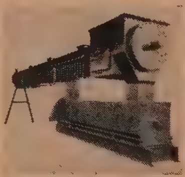


Retorts — quick closing doors

Conveyor type packing tables

Mills and disintegrators

Cyclones and sacking equipment



Cookers and presses

Steam tube dryers

STANDARD

Write today for illustrated bulletin.

STANDARD STEEL CORPORATION

5013 Boyle Ave., Los Angeles 58 • 7 East 42nd St., New York 13

ALASKA FISH BY-PRODUCTS

(NOT INCLUDING VITAMIN OILS)

Year	Southeast Alaska			Prince William Sound			Kodiak Island Area			All Alaska		
	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons
1953	3	*	*	...	*	*	...	**	*	3	500,713	2,544
1952	5	*	*	2	*	*	**2	*	*	9	803,467	4,590
1951	5	527,092	2,439	4	803,773	3,600	**5	109,000	632	14	1,439,865	6,671
1950	4	593,720	2,694	4	847,950	3,305	**4	1,581,514	7,695	12	3,033,184	13,694
1949	5	651,186	3,269	1	...	140	**3	16,900	199	9	686,086	3,608
1948	8	623,814	2,631	4	919,437	2,974	**7	1,959,378	7,078	19	3,501,631	12,483
1947	8	1,762,648	6,727	...	...	...	6	2,017,027	7,505	14	3,779,675	14,232
1946	5	1,359,409	6,860	2	453,962	2,066	4	1,731,536	6,942	11	3,544,907	15,868
1945	5	1,110,973	4,507	2	295,951	1,541	4	1,328,249	5,140	11	2,835,173	11,188
1944*	...	...	...	...	...	...	...	...	...	8	2,355,010	8,777
1943*	...	...	...	...	...	...	...	...	...	8	1,644,142	7,280
1942	1	60,000	700	1	62,518	270	2	770,000	2,570	4	892,518	3,540
1941	1	80,500	555	6	1,221,242	5,408	4	1,592,506	5,777	11	2,894,248	11,740
1940	1	40,000	450	6	1,290,857	4,720	3	808,822	2,973	11	2,139,679	8,143
1939	5	882,317	4,042	7	2,227,087	7,838	6	1,729,127	5,617	18	4,846,631	17,497
1938	6	951,109	4,489	6	2,403,797	8,847	4	1,224,273	3,637	16	4,593,579	16,973
1937	9	2,024,315	8,725	6	2,175,423	7,102	5	1,388,300	3,809	20	5,588,038	19,636
1936	6	1,421,470	6,487	6	1,426,323	5,546	5	975,344	3,018	17	3,823,137	15,051
1935*	...	...	...	...	...	...	...	...	...	19	3,853,243	15,818

*Data for separate areas of Alaska not available.

**Includes one on Cook Inlet.

facture in 1953, due in large measure to continued high activity in the California tuna canning business.

It is evident from an examination of the statistics that the 1953 gain in oil output as compared with 1952 was much greater than the increase in tonnage of meal. This reflects the resumption of the British Columbia herring fishery in the fall of 1953, and the fact that the fish taken there were unusually fat.

The Canadian herring fishery often produces some astonishing catches, and this was particularly true in the fall of 1953, when the fishing fleet at times encountered some of the heaviest fishing ever recorded.

Alaska Herring Fishery Continues at Low Level

Alaska herring operations continued to be extremely disappointing in 1953, although the two plants active found some good fishing in the Sitka area and had a fair yield for their limited operations.

Investigations conducted by the U. S. Fish and Wildlife Service and a private operator during the winter of 1952-3 in Southeast Alaska failed to disclose evidence of herring abundance sufficient to support a winter fishery. Provision has been made for a special commercial season and research activity by a Federal research vessel in order to provide a test of the theory that Alaska waters might contain a winter population of herring comparable to that which provides the mainstay of the substantial Canadian herring fishery only a short distance to the south.

While winter herring were found in Alaska waters, abundance was not

FISH MEALS

FISH OILS

VITAMIN OILS

●

JAMES FARRELL & CO.
ESTABLISHED 1920

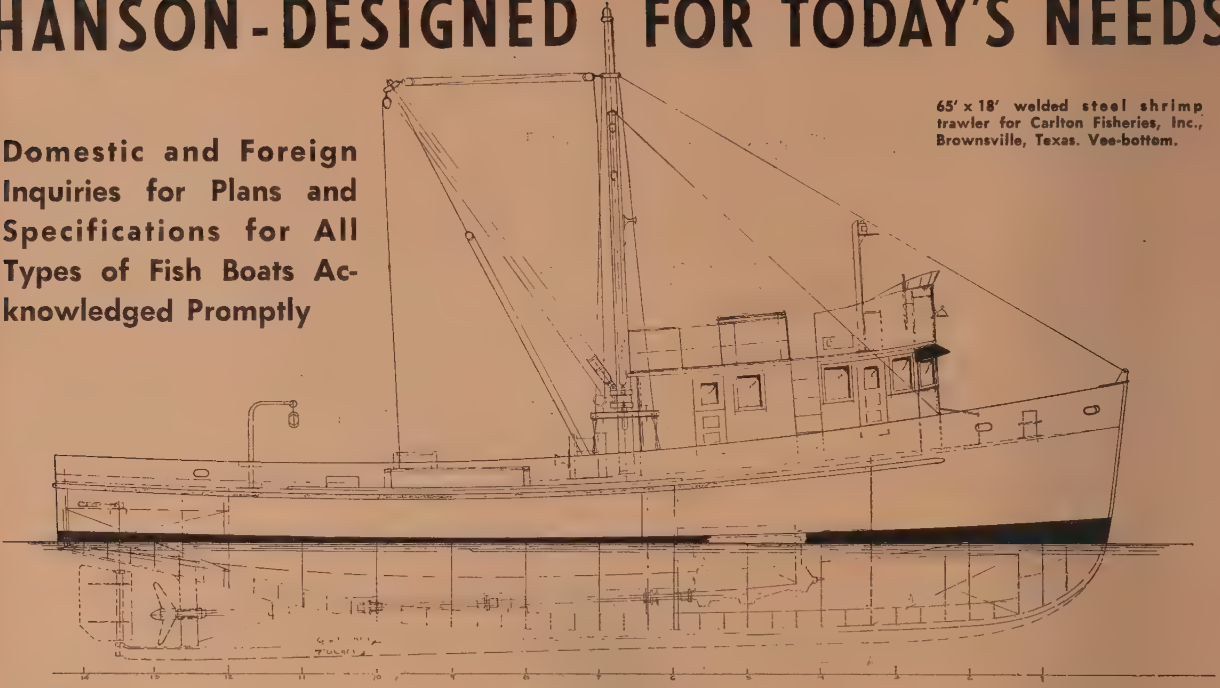
●

HOGE BUILDING
705 SECOND AVENUE
SEATTLE 4, WASH.

PACIFIC MUTUAL BUILDING
523 West Sixth Street
LOS ANGELES 14, CALIF.

HANSON-DESIGNED FOR TODAY'S NEEDS

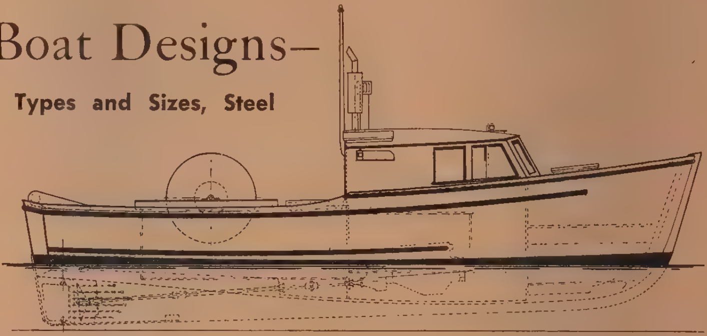
Domestic and Foreign Inquiries for Plans and Specifications for All Types of Fish Boats Acknowledged Promptly



65' x 18' welded steel shrimp trawler for Carlton Fisheries, Inc., Brownsville, Texas. Vee-bottom.

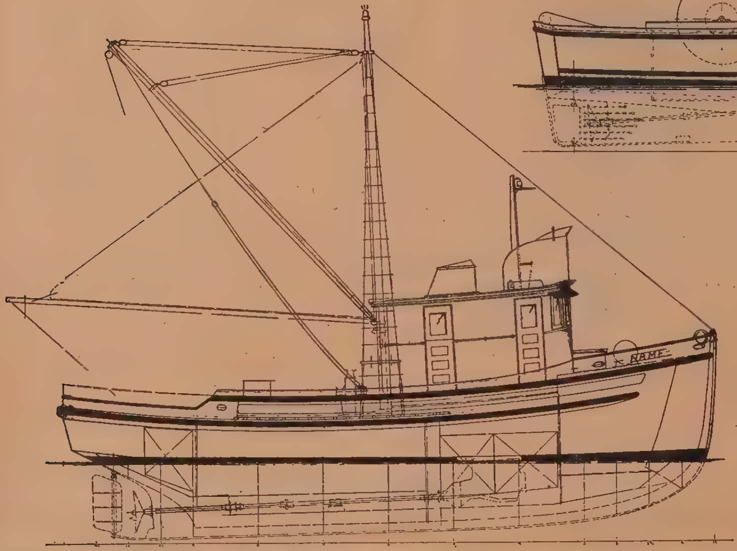
Distinctive New Fish Boat Designs—

Plans Available of Proven Boats . . . All Types and Sizes, Steel and Wood.



Modern 30' 9" x 10' x 4' 2" vee-bottom gillnetter. Its sturdy construction features 4" keel, 1" plank and 1¾" x 3½" sawn frame. Power: 100 to 150-hp. Two large berths forward, with range and sink in cabin. Also convertible for trolling.

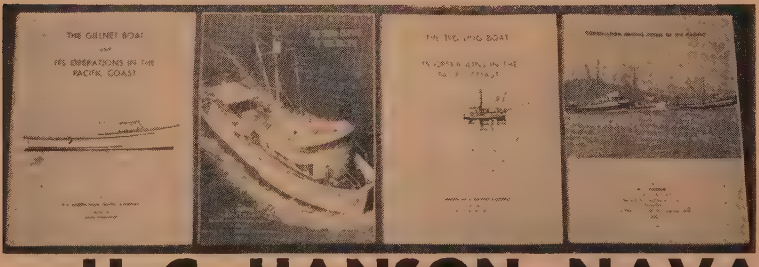
•



This 38' x 12' combination wood fishing vessel of bent-oak frame construction is suitable for seining, dragging, trolling and long-lining for salmon, halibut, Albacore and market fish.

Available After May 20!

Four Technical Booklets on the Design, Construction and Operation of Pacific Fishing Vessels—By H. C. Hanson.



H. C. Hanson's technical booklets on four different classes of Pacific fishing vessels will be available to the trade at a nominal cost after May 20.

These informative booklets, shown at left, are lavishly illustrated and contain detailed reference material on the design, construction and operation of 1, Gillnetters; 2, Tuna Clippers; 3, Trollers and 4, Combination Net, Line and Live Bait Boats. They may be purchased in sets of four, or separately.

H. C. HANSON, NAVAL ARCHITECT

102 COLMAN FERRY TERMINAL SEATTLE 4, WASHINGTON ELiot 3549

such as to encourage exploitation beyond the bait requirements of the halibut fleet.

Alaska herring operations again in 1953 were confined wholly to Southeast Alaska, there being no reduction activity whatever on Prince William Sound or in the waters adjacent to Kodiak Island.

●

BRITISH COLUMBIA'S whaling fleet in 1953 made its best catch in many years, with a total of 514 killed by the British Columbia Packers, Ltd., fleet serving the company's shore plant at Coal Harbor, northwest Vancouver Island. British Columbia Packers, Ltd., was again the only operator in this industry in North America.

The company had the advantage of a full working season and there was no delay in getting the hunt under way, as there was in the spring of 1952 when a dispute over wages and other terms held the fleet in port for a month. The 1953 catch exceeded that of the previous season by 63 whales. Productionwise, it was the best year for the whaling department.

"Sea Scanar" Employed

All but 25 of the whales were big enough to qualify for the bonus category, with crew members sharing in the reward. The crews also drew additional pay for the whales killed over a set minimum—500.

During the past season the company continued its experimental work, new methods of harpooning and detecting being among the more significant. The "electrocuting" harpoon first used in the Antarctic was tried out. The detection device, representing an application of electronics, is known as the Sea Scanar. It is the product of Minneapolis Honeywell Regulator Co. It enables the crew to locate the whale under water and to keep the ship in position for an effective shot when the whale "blows." This may be more extensively used during the 1954 season

The DehydrO-Mat*....

....World's Largest Fish Meal Dryer!

OUTSTANDING—

- IN SIZE: 12' diameter by 60' long; 12' x 18' x 30' furnace; 18' exhaust fan; 22' x 55' collector; handles 3 tons of air per minute.
- IN DESIGN: New engineering concept, employing latest aero and thermo dynamic principles. **DehydrO-Mat's** varying diameter cylinder regulates air and material velocity, controls temperature drop and meal retention time.
- IN OPERATION: Low drying temperature automatically maintained under varying load demands, since air volume and fuel are electronically controlled.
- IN PRODUCTION: TOP CAPACITY UNKNOWN! Under limited raw material supply, the **DehydrO-Mat** handled over 55 tons (165,000 Fish) per hour with 22% recovery producing the finest quality meal.

Plan on a **DehydrO-Mat** for next season.

* Patents Pending.

EDW. RENNEBURG & SONS CO. BALTIMORE 24, MD., U.S.A.

"PIONEERS IN FISH MEAL AND OIL MACHINERY—PREFERRED THE WORLD OVER"

STORFOLD & GRONDAHL PACKING CO.

Our Own Boats Bring Catches Daily,
Guaranteeing Production of Highest Quality

●

SCOTCH CURED HERRING
HERRING OIL and MEAL

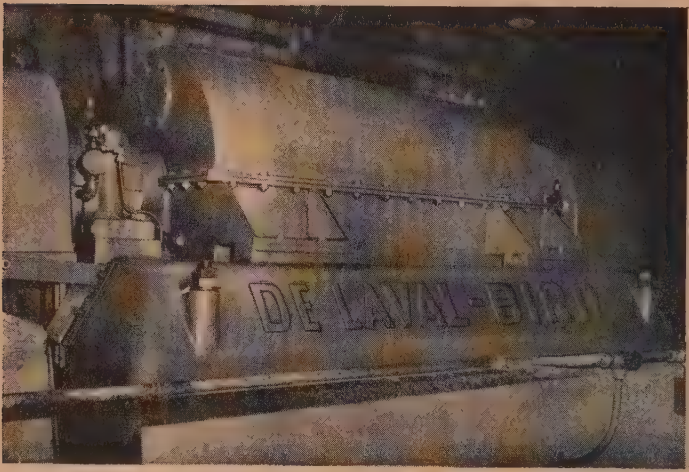
●

Office:
210 Administration Bldg., Fishermen's Terminal
Seattle 99, Wash. Phone ALder 6993
Cold Storage, Packing and Reduction Plant:
WASHINGTON BAY, ALASKA

3,000 · · · 6,000 · · · 10,000

There is a De Laval-Bird Meal Recovery Centrifuge for every size plant. Whether you require a capacity of 3,000 gallons of press liquor per hour, or up to 10,000, one De Laval-Bird machine will do the job.

The initial investment is economical, and the centrifuge reduces maintenance costs. Assure yourself maximum recovery of high protein fish meal, of low oil content, with a De Laval-Bird unit.



THE DE LAVAL SEPARATOR COMPANY
Chicago POUGHKEEPSIE, N.Y. San Francisco

DE LAVAL

FISH OIL SEPARATORS

CALL ON CAL-PRESS

FOR YOUR COMPLETE FISH PLANT EQUIPMENT REQUIREMENTS

Whatever your problem, call on CAL-PRESS for efficient, dependable fish reduction equipment — recognized leaders in the field for three-quarters of a century.

FISH COOKERS • CONTINUOUS SCREW PRESSES • DEHYDRATORS
MEAL BEATERS • BATCH DRYERS • FOOTS RECOVERY UNITS
MEAL GRINDER & BLOWER UNITS • COMPLETE PLANTS

CALIFORNIA PRESS MANUFACTURING COMPANY
1800 FOLSOM STREET
SAN FRANCISCO 3, CALIFORNIA

E. A. TOWNS LIMITED
MARINE BUILDING — VANCOUVER, B.C.
Importers & Exporters

FISH MEALS
FISH OILS
FISH SOLUBLES
VITAMIN OILS
FROZEN TUNA
DRIED SALT HERRING
CANNED SALMON — CANNED HERRING

Cables — Townltd *Phone — PA 5558*

WASHINGTON LABORATORIES, INC.
Pier 66, Seattle 1, Washington

Manufacturers of

NATURAL VITAMIN A

Produced by American boats in American waters, refined in American plants by American labor for American consumers.

Liver Buying Agents from Alaska to Mexico

Manufacturers of
"FRAN-KEM"
The New Food Preservative

PACIFIC NORTHWEST FISH BY-PRODUCTS

(Not Including Vitamin Oils)

YEAR	OREGON					WASHINGTON					YEAR
	# Active Plants	Fish Meal Tons	Sardine or Pilchard Oil, Gals.	Other Fish Oils, Gals.	Total Fish Oil, Gals.	# Active Plants	Fish Meal Tons	Sardine or Pilchard Oil, Gals.	Other Fish Oils, Gals.	Total Fish Oil, Gals.	
1953	2	1,607	...	53,000	53,000	4	2,690	...	169,000	169,000	1953
1952	2	744	...	19,000	19,000	4	2,217	...	138,140	138,140	1952
1951	2	1,150	...	24,000	24,000	4	2,047	...	132,638	132,638	1951
1950	3	1,260	...	23,085	23,085	5	1,032	...	110,960	110,960	1950
1949	3	...	...	26,700	26,700	5	1,754	...	111,868	111,868	1949
1948	4	1,228	114,928	...	114,928	9	3,269	...	210,923	210,923	1948
1947	4	2,040	228,558	17,626	246,184	8	4,548	44,375	201,863	246,238	1947
1946	3	1,633	120,336	13,391	133,727	10	3,730	186,690	154,733	341,423	1946
1945	3	907	...	26,000	26,000	7	3,542	78,558	158,958	237,516	1945
1944	2	1,200	...	50,000	50,000	5	901	960	64,500	65,460	1944
1943	3	1,365	32,000	26,000	58,000	6	2,901	277,627	78,000	355,627	1943
1942	2	861	25,014	8,200	33,214	6	2,003	27,787	168,600	196,387	1942
1941	4	2,969	398,235	...	398,235	11	4,168	400,102	152,389	552,491	1941
1940	5	592	114,717	...	114,717	11	1,451	35,656	145,174	180,830	1940
1939	6	3,933	833,300	...	833,300	8	4,026	672,066	103,500	775,566	1939
1938	6	2,933	718,830	...	718,830	10	4,986	1,153,339	74,392	1,227,731	1938
1937	5	2,775	689,159	...	689,159	6	3,886	808,396	125,400	933,797	1937
1936	9	2,864	481,512	70,985	552,497	4	1,710	193,467	82,800	276,267	1936
1935	7	4,763	1,104,389	39,985	1,144,374	2	1,032	...	110,960	110,960	1935

1953 – FISH LIVER RECEIPTS by SEATTLE DEALERS – 1953

SPECIES	(Pounds)												
	Dec. '52	Jan. '53	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	TOTAL
Dogfish	62,505	15,486	11,612	7,077	8,105	14,442	8,055	2,338	1,142	2,772	4,172	17,325	155,031
Halibut Viscera	761	...	...	...	...	31,917	174,254	97,781	66,676	17,278	4,789	606	394,062
Sablefish Viscera	6,923	1,156	5,298	32	338	36	228	3,652	12,891	25,989	29,609	21,387	107,445
Lingcod Viscera	12,056	405	5,663	1,338	2,136	2,752	4,620	3,364	1,422	1,697	6,690	3,388	45,531
Soupfin Shark	2,330	706	4,659	821	693	170	3,330	7,407	5,382	8,310	4,960	1,810	40,578
Miscellaneous	58,036	25,962	101,788	27,530	57,821	30,960	28,769	104,611	55,008	62,500	84,999	23,357	661,341
Total	142,611	43,715	129,020	36,798	69,093	80,277	219,256	219,153	142,521	118,452	135,219	67,873	1,403,988

1953 CALIFORNIA SARDINE REDUCTION

Months	Total Tons Received	Tons Reduced Under Permit	Oil Gallons	Meal Tons	Months
January	313	3	80	2	January
October	1,734	...	9,507	104	October
November	561	...	3,396	33	November
December	449	...	2,694	27	December
	3,057	3	15,677	166	

as a result of the past year's experience. The Sea Scanar, of course, has been used successfully in the herring and other fisheries as well as in whaling.

Whale Solubles Valuable Basis for Stock Feed

The company continued its laboratory tests in connection with processing, and the Coal Harbor station is now regarded as the world's most modern and best equipped for integrated production. Interesting developments in connection with the utilization of whale solubles as stock feed are reported. Being mostly in liquid form and highly viscous, the solubles present difficult handling problems. The whale "juice" resulting from cooking the flesh to obtain oil, is evaporated, first being thickened by boiling under vacuum to the consistency of molasses.

Seeking a cheap basic material, fibrous in texture, as a blend for solubles, it was found that some 30,000 tons of refuse grain screenings are accumulated each year in Vancouver elevators, without substantial market value.

Sperms Lead in Kill

Most of the whales taken in 1953 were sperms, and unfortunately the demand for sperm oil was not particularly favorable during the year. A total of 267 sperms were taken, with seis coming second, 169, and 43 humpbacks. There were ten grey whales, four bottlenose, seven blue.

The
Jordan Company
Kent E. Ratcliffe, Manager
●
Specializing in Weighing of Fish Products
●
Public Weighers Since 1915
911 Western Avenue
SEATTLE 4, WASH.

DEPENDABLE
REFRIGERATION
FOR ALL PURPOSES
AFLOAT AND ASHORE
Call us for information
WORTHINGTON
PUGET SOUND ENGINEERING CO.
3838 10th N.E. EV. 2500
SEATTLE

GENERAL TESTING LABORATORIES
LIMITED
ANALYTICAL CHEMISTS
INSPECTORS
BULK OIL SURVEYORS
755 BEATTY STREET, VANCOUVER 3, B. C.
VITAMIN A ASSAYS
MEALS & OILS
IMPORT ANALYSIS

OIL and MEAL

CALIFORNIA FISH REDUCTION PLANTS

SAN PEDRO DISTRICT

Calif. Marine & Pkg. Co., Max J. Gorby	Terminal Island
Coast Fisheries Division of Quaker Oats, J. R. Biven	Wilmington
Franco-Italian Packing Corp., Jos. Mardesich	Terminal Island
French Sardine Co., Joseph J. Bogdanovich (2)	Terminal Island
K & M Fisheries, M. D. Marsh	Long Beach
Lido Fisheries, Nick Kovacevich	Long Beach
Pan-Pacific Fisheries, Inc., Gerald Cigliana	Terminal Island
South Coast Fisheries, Inc., Peter A. Kuglis	Terminal Island
South Pacific Canning Co., M. D. Marsh	Long Beach
Southern California Fish Corp., H. P. Christian	Terminal Island
Van Camp Sea Food Co., Gilbert C. Van Camp	Terminal Island

SAN DIEGO DISTRICT

American Processing Co., Lawrence Oliver	San Diego
High Seas Tuna Packing Co., John Xitco	Pt. Loma
Van Camp Sea Food Co., Glenn Copeland	San Diego
Westgate-California Tuna Packing Co., James B. Lane	San Diego

LOWER CALIFORNIA (MEXICO)

La Industrial Ensenada, Arturo Paredes	Ensenada
Pesquera del Pacifico S. de R. L., F. A. Morales, Jr.	Sauzal

MONTEREY BAY DISTRICT

Brucia, J. B.	Moss Landing
California Frozen Fish Company, Sal Ventimiglia	Monterey
California Packing Corp., Don T. Saxby (2 plants)	Monterey
Carmel Canning Co., J. R. Perry	Monterey
Del Vista Packing Co., W. O. Lunde	Monterey
Edgewater Packing Co., C. J. Broad	Monterey
Enterprise Packers, Sebastian Sollecito	Monterey
Ferrante Fisheries, Sal Ferrante	Monterey
Hovden Food Products Corp., K. Hovden (2)	Monterey
Hovden Food Products Corp., K. Hovden (2)	Moss Landing
Monterey Canning Co., Magnus Flause	Monterey
Moss Landing Fisheries, D. C. Kirby	Moss Landing
Oxnard Canners, James Tolagson (2)	Monterey
Peninsula Packing Co., G. H. Leutzinger (2)	Monterey
Pacific Vegetable Oil Corp., Frank Richey	Moss Landing
San Carlos Canning Co., Wm. Hudson (2)	Monterey
Santa Cruz Canning Co., Joe Olivieri	Moss Landing
Santa Inez Fisheries, Inc., Joe Alves	Moss Landing
San Xavier Fish Packing Co., F. E. Raiter	Monterey
Sea Beach Packing Co., Sal Palma	Monterey

SAN FRANCISCO DISTRICT

F. E. Booth Co., Inc., A. H. Mendonca	San Francisco
Cader Bros. Tallow & Soap Co., A. Cader	Petaluma
Carquinez Fisheries, John Costanza	Pt. San Pablo
Crown By-Products Co.	San Jose
Cypress Fisheries, W. L. Martignoni	Pt. San Pablo
Edible Fish Meals & Oils, Alex Imlach	Pt. San Pablo
Golden State Fisheries, C. J. Garibotti	Benicia
Grader Marine By-Products Co., W. F. and H. B. Grader	Ft. Bragg
Elwyn C. Hale Fisheries, Mrs. Mabel E. Hale and Elwyn C. Hale (2 plants)	Antioch
Hoffman Packing Co., N. F. Roesling	McNear's Pt.
J. D. Packing Co., J. A. Davi and Gus Bruno	San Francisco
Hunter & Foland	Field's Landing
Lansing Fisheries, W. L. Martgnoni	San Francisco
Nopco Chemical Co., J. A. Reynolds	Richmond
Northern Packing Corp., Geo. Christo	San Francisco
Ozal Packing Co., Frank Mezin	Ozol
Red Rock Fisheries, Inc., Paul Orloff (2)	Pt. San Pablo
Romeo Packing Co.	Half Moon Bay
Royal Soap & Tallow Co., L. Martinelli	San Francisco
Sardine Fisheries, Lt., Frank Mezin	Ozol
Smith-Ferrari Fish Meal Co., T. J. Ferrari	Chester
Tamalpais Fishing & Packing Co., J. J. Dorsey (2)	Pt. San Pablo
Valley Ford Tallow Works, L. Jensen	Bodega
Winged Victory Fish Prod. Corp., Geo. J. Christo	San Francisco

BUCHAN & HEINEN PACKING CO.

Packers and Producers of

Edible Herring Meal and Oil

PLANT: Port Armstrong, Alaska **Office: 672 Colman Bldg., SEATTLE 4, U.S.A.**

FOR CERTIFICATION OF: Fish Oil and Meal — Fish Solubles — Vitamin Oil — Shark and Fish Livers — Canned and Frozen Fish

SPECIFY: **CURTIS & TOMPKINS, LTD.**

Established 1878
236 Front Street, San Francisco 11, California
Chemists . . . Samplers . . . Bacteriologists . . . Vitamin Assayers
OPERATING AREAS: San Francisco — Eureka — Monterey — Los Angeles — San Diego

We are distributors for:

AIRGUIDE & TAYLOR BAROMETERS
HENSCHEL TELEGRAPHS & SIGNAL SYSTEMS
MARMAC CONTROLS & ENGINE SYNCHRONIZERS
SETH THOMAS MARINE CLOCKS
SMITH MARINE CLOCKS
TORREY MARINE WINDOWS, AIR PORTS & SCUTTLES

in Washington, Oregon and Alaska

● ● ● ● ● ●

We are distributors for:

APELCO RADIOTELEPHONES & DIRECTION FINDERS
WEBSTER WHIP ANTENNAS

in Washington and Alaska

We carry COMPLETE STOCKS for IMMEDIATE DELIVERY

NAVIGATION EQUIPMENT
CHARTS & BOOKS
APELCO RADIOTELEPHONES
FATHOMETER DEPTH SOUNDERS
COMPASSES, BAROMETERS & MARINE CLOCKS
AMERICAN & IMPORTED BINOCULARS
COMPLETE NAVIGATION SUPPLIES

COMPASS ADJUSTERS

NORTHWEST INSTRUMENT Co.
incorporated

"STORE-SIDE" CUSTOMER PARKING
2313 Third Ave. (Near Bell St.) SEATTLE
Tel. Seneca 4780

We maintain shop facilities & stock parts to service all equipment we sell

DISTRIBUTORS

Willard Marine Batteries

Next time you need batteries, remember that you pay no more for Willards. And their longer life and freedom from trouble makes *Willards cost less per year to own!*

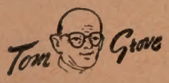
FREMONT ELECTRIC CO.

Power and Light for Marine and Stationary Installations

744 N. 34th St., EV 2323 — MAIN STORE
SEATTLE
132 Spokane St., SE 7984 — SOUTH END STORE

Grove Processing Equipment Ltd.

Sales and Service



YEOMANS FISH PUMPS
U.S. MOTORS
WIRE CONVEYOR BELTS

1980 Cypress St. BA 2021 Vancouver, B. C.

SHAFER-HAGGART, LTD.

CABLE ADDRESS SALES - VANCOUVER
402 W. PENDER ST. VANCOUVER 3, CANADA

Brokers - Distributors - Exporters

Fish Oils
Fish Meals
Dry Salt Herring
Vitamin Oils
Fish Solubles
Canned Salmon

FOR LONGER-LASTING PROTECTION..

FROM TRUCK to KEEL
FROM STEM to GUDGEON
ATLAS MARINE PAINTS
ATLASPAR VARNISH
ATLASHEEN ENAMEL
GOLD LABEL COPPER COMPOUND

Ask at ship yards or
ATLAS PAINT & VARNISH CO.
1922 East Gage Ave.
Los Angeles 1
(Phone Kimball 6214)

ATLAS MARINE PAINTS

INDEX TO ADVERTISEMENTS

Equipment, Supplies and Service Firms

Adams Net & Twine Div. Linen Thread Co., Inc. 3
Adelman Machinery Co. 128
Alaska Steamship Co. 18
Albertoli, John 10
Albina Engine & Mch. Wks. 66
Allis-Chalmers Mfg. Co., Buda Co. Div. 6
American Can Co. 64, 65
American Marine Paint Co. 72
American Rubber Mfg. Co. 58
Amerio Contact Plate Freezers Inc. 226
Archer-Daniels-Midland Co. 173
Astoria Marine Constr. Co. 34
Atlas Paint & Varnish Co. 255
Atwood Adhesives, Inc. 128

Baier & Assoc., L. S. 12
Baker Engr. Corp. 196
B. C. Ice & Cold Storage Ltd. 222
Bibb Manufacturing Co. 52
Brush Aboe, Inc., Petter Diesel Eng. Div. 63
Bryant's Marina 126
Buda Co., The, Div., Allis-Chalmers Mfg. Co. 6
Bulman Bros. 124

California Cotton Mills 39
California Press Mfg. Co. 252
Campbell Machine Co. 202
Carroll Co., Inc., Talbott 125
Carruthers Co., E. H. 172
Caterpillar Tractor Co. 27
Chisolm-Ryder Co. of Pa. 12
Chris-Craft Corp., Marine Engine Div. 44
Chrysler Corp., Marine Engine Div. 69
Cincotta Bros. 240
Coast Mfg. & Supply Co. 62
Colberg Boat Works 194
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Div. 113
Columbia-Geneva Div., U. S. Steel Corp. 38
Continental Can Co. 36, 37
Coventry Victor Engines 194
Crown Zellerbach Corp., Western Waxed Paper Div. 31
Cyclone Fence Dept., U. S. Steel Corp. 44

Davidson, J. S. 12
DeFever, Arthur 204
De Laval Separator Co. 252
Detroit Diesel Div., General Motors Corp. 41

Diamond Ice & Storage Co. 233
DuPont de Nemours & Co., Inc., E. I. 15

Ederer Div. Linen Thread Co., Inc. 7
Edwards Co., E. H. 60
Electric Storage Battery Co. Inside back cover
Enterprise Eng. & Mchny Co. 25
Enterprise Mfg. Co. 42

Federal Propellers 42
Fellows & Stewart, Inc. 194
Fibreboard Products Inc. Outside back cover
Fireman's Fund Group 26
Fish Net & Twine Co. 224
Fitler Co., Edwin H. 24
Flohr & Co. Metal Fabricators 106
Forster Shipbldg Co., Inc. 204
Freeman, Doc 214
Freeman, Wood 208
Fremont Electric Co. 255

General Hardwood Co. 44
General Motors Corp., Detroit Diesel Div. 41
General Petroleum Corp. 17
General Testing Laboratories Ltd. 253
Gigy & Assoc., Inc., M. J. 12
Grandy Boat Co. 214
Grove Processing Equipment Inc. (Ltd.) 255

Hansen & Rowland Inc. 4
Hanson, H. C. 250
Harbor Boatbldg Co. 204
Harnischfeger Corp. 33
Hart & Burns Inc. 198
Heminway & Bartlett Mfg. Co. 20
Hiller, Paul W. 196

International Nickel Co., Inc. 46

Johnson Co., Geo. A. 8
Johnson Motors 51
Jordan Co. 253

Kaar Engineering Corp. 198
Ketchikan Cold Storage Co. 228
Kohlenberger Engr. Corp. 186

Larson Boat Shop, Al 204
Leslie Salt Co. 50
Linen Thread Co., Inc. 48
Lipsett Ltd., Edward 216

Long Beach Salt Co. 194
Longview Fibre Co. 40

Mailler Searles, Inc. 43
Marden & Hagist 216
Marine Constr. & Design Co. 72
Marine Hardware Co. 201
Marine Office of America 23
Marine Products Co., Pumps 218
Marine Products, Inc. 198
Markey Machinery Co., Inc. 58
Mathers Supply Co. 214
Mathews Conveyer Co. West Coast 239
McLaughlin Co., Inc., H. G. 214
Meletron Corp. 199
Metal Marine Pilot 208
Michigan Wheel Co. 46
Modern Maid Food Products, Inc. 50
Moffitt Inc., Lucian Q. 34
Monk, Edwin 214
Mt. Vernon-Woodberry Mills 35
Murphy Diesel Co. 19
Murray-Latta Machine Co., Ltd. 128
Mustad & Son, O. 46

National Steel & Shipbldg Corp. 204
National Supply Co., Engine Div. 34, 53, 68
N C Marine 13
Newby, G. Bruce 204
Nordberg Mfg. Co. 21
Nordby Supply Co. 106
Northern Commercial Co. 13
Northwest Instrument Co. Inc. 255

Onan & Sons Inc., D. W. 224

Pacific Marine Supply Co. 59
Pacific National Bank of Seattle 58
Pacific Tel & Tel Co. 38
Pacific Towboat & Salvage Co. 204
Pacific Work Boat 220
Paperbox Corp. 245
Pauls Fish Net Div. Linen Thread Co., Inc. 11
Pelican Cold Storage Co. 224
Petersburg Cold Storage Co., Inc. 214
Petter Diesel Eng. Div., Brush Aboe, Inc. 63
Pettit Paint Co., Inc. 55
Pioneer Sand & Gravel Co. 110
Puckett Co., The 106
Puget Sound Engr., Inc. 253

Radiomarine Corp. of America 57
Raytheon Mfg. Co., Equip. Sales Div. 2
Red Wing Motor & Mfg. Co. 198
Renneburg & Sons Co., Edward 251
Roebling's Sons Co., John A. 42
Rudd & Cummings 218

San Diego Marine Constr. Co. 180
Schmidt Lithograph Co. 182, 183
Seaside Supply Stores, Inc. 192
Seattle-First National Bank 24
Seattle Marine & Fishing Supply Co. 111
Shark Chaser Chemicals Co. 62
Shepherd Marine 190
Shepherd Son & Co., J. H. 194
Sitka Cold Storage Co. 230
Skagit Steel & Iron Works 24
Smith Cannery Machines Co. 118
Snow-Nabstedt Gear Corp. 66
Snyder & Son, Inc., M. L. 198
Sperry Gyroscope Co. 67
Standard Oil Co. of Calif. 29
Standard Steel Corp. 248
Starr Net Co., A. M. 79
Sudbury Laboratory 66
Sunde & d'Evers Co. 5

Tacoma Boatbldg. Co., Inc. 14
Techkote Co., Inc. 204
Thompson Engineering Co. 194
Todd Shipyards Corp. 224
Tower Co., A. J. 38
Tubbs Cordage Co. 30
Turner Halsey Co. 35
Twin Disc Clutch Co. 241

Union Oil Co. 32
United States Steel Corp. Columbia-Geneva Div. 38
Cyclone Fence Dept. 44
Universal Canning Machinery Co. 188
Universal Motor Co. 61

Vilter Manufacturing Co. 237

Washington Iron Works 209
Western Canner & Packer 22
Western Waxed Paper Div., Crown Zellerbach Corp. 31
White & Sons, Inc., Wilfrid O. 10
Wickwire Spencer Steel Div., CF&I 113
Woolsey Paint & Color Co. Inc. 66

Canners, Packers and Distributors

Alaskan Glacier Sea Food Co. 213
Alioto Fish Co., F. 244
American Freezer Co. 244
Anderson & Miskin, Ltd. 102
Annette Islands Canning Co. 54
Atlin Fisheries, Ltd. 86

Barbey Packing Corp. 124
Barry & Co., J. R. 166
Beegle Packing Co. 116
Bell-Irving & Co. Ltd., H. 56
Birks-Crawford Ltd. 124
Booth Co., Inc., F. E. 192
Booth Fisheries Corp. 234
Bornstein Seafoods, Inc. 236
Boyd-Collins Co. 244
British Columbia Packers Ltd. 16
Buchan & Heinen Packing Co. 254
Buelow Co., C. F. 128
Bunzen & Davis 218

California Marine Curing & Packing Co. 166
California Packing Corp. 76
Calkins & Burke Ltd. 122
Camillo, J. J. 244
Canadian Fishing Co. Ltd. 108
Chignik Fisheries Co. 68
Coast Fisheries 47
Columbia River Packers Assn., Inc. 94
Consolidated Fisheries, Inc. 240
Copper River Packing Co. 120
Curtis & Tompkins, Ltd. 254

Dehn & Co., Inc. 96
Deming & Gould Co. 100
Doty Fish Co. 86
Dressel-Collins Fish Co. 214

Eardley Fisheries Co. Inc. 236
Emard Packing Co., Inc. 104
Engstrom Bros. 242

Farrell & Co., James 249
Farwest Fishermen Inc. 122
Farwest Wrangell Co., Inc. 228
Fidalgo Island Packing Co. 56
Fishermen's Packing Corp. 70
Fist Brokerage Co. 128
Foley Brokerage Co. 128
Franco-Italian Packing Co. 202
Frohman & Sons, L. H. 72

Gavin Bros., Inc. 124
Gosse Co., F. A. 114

Halferty & Co. Inc., G. P. 82
Hamlin Assoc., E. H. 128
Harris Co. Inc., P. E. 80
Hawaiian Tuna Packers, Ltd. 176
Hutchison y Asoc., S.A., Wm. H. 196

Jones, Weismann & Co. Inc. 108

Kadiak Fisheries Co. 28
Kayler-Dahl Fish Co. 62
Kelley-Clarke Co. 88
Ketchikan Packing Co. 104

Lazio Fish Co., Inc., Tom 244
Libby, McNeill & Libby 45
Los Angeles Smoking & Curing Co. 240

Main Fish Co., Inc. 238
Mann & Sons, Wm. A. 124
Marine Products Co. 206
McCallum-Legaz Fish Co., Inc. 238
McGovern & McGovern Inside front cover

Meinrath Brokerage Co. 128
Meredith Fish Co. 9
Millerd & Co., Francis 120
Morley Sales Co. 242
Morse Co., A. H. 128

Nagle Co., John 242
Nelson Bros. Fisheries Ltd. 96
New England Fish Co. 86
Nicholls Co. Ltd., J. W. 242
Northern Products Corp. 230
Northwest Distributors 120

Ocean Beauty Sales Co. 9
Oceanic Fisheries Co., Inc. 213
Oceanic Sales Co. 99
Oxenberg Bros. 218

Pacific American Fisheries, Inc. 100
Paladini, Inc., A. 232
Pan-Pacific Fisheries Inc. 168
Parrott & Co. 196
Paver & Assoc., Inc., Paul 128
Peabody & Co., Henry W. 92
Peres & Co., Jacob J. 196
Peterson Co., Frank B. 116
Point Adams Packing Co. 112
Portland Fish Co. 9
Powell & Russell 128
Preiswerck Ltd., K. J. 108
Puget Sound Brokerage Co. 120

Quaker Oats Co., Coast Fisheries 47

Red Salmon Co. 116

Salmon & Tuna Sales Co. 104
San Juan Fish. & Pack. Co. 222
Shafer-Haggart, Ltd. 255

Shiel & Co., Walter P. 84
Sidwell & Co., Ltd. 108
Simpson, Roberts & Co., Ltd. 128
Skinner & Eddy Corp., Inc. 90
Sloan Co., R. M. 194
Slocum & Co., Inc., Dudley 242
South Coast Fisheries, Inc. 196
South Pacific Canning Co. 172
Star-Kist Foods, Inc. 163
Stix, Inc., Robert L. 213
Storfold & Grondahl Packing Co. 251
Sun-Pacific, Inc. 190

Todd & Sons Ltd., J. H. 123
Towns Ltd, E. A. 252
Trubenbach & Scheffold, Inc. 244
Twin City Fishermen's Coop Assn., Inc. 240

Union Fish Co. 240
Union Fishermen's Co-Op. Packing Co. 49

Van Camp Sea Food Co., Inc. 178
Vita Food Products, Inc. 78

Wards Cove Packing Co. 116
Washington Fish & Oyster Co., Inc. 9
Washington Laboratories, Inc. 252
Wendt, Ivar 213
Western Fishing Co. Ltd. 214
Westgate-California Tuna Packing Co. 170
Weyand & Co. 96
Whiz Fish Products Co. 226
Wiegardt Bros. 214
Wilbur-Ellis Co. 174, 246
Willapoint Oysters 214

"NORTH HEAD", a combination fishing boat owned by Mr. Frank Spenger, Berkeley, Cal. Diesel-powered and equipped with 16-cell MVM-21 Exide-Ironclad battery.

TWELVE YEARS ON THE JOB, MORE TO GO

Exide-Ironclad BATTERIES

In March, 1942, an Exide-Ironclad battery was installed on the fishing boat *North Head*. This long-life battery is still on the job providing dependable power for the vessel's many electrical services. These include fathometer, radio and transmitter, motor for air compressor, 32-volt Freeman Iron Mike, refrigerator, ship's lighting.

Peak performance . . . at many jobs . . . for a long, long time! Always an outstanding Exide-Ironclad quality. But greater now than ever before in the improved Exide-Ironclad which assures:

UTMOST RELIABILITY and SAFETY

SUSTAINED POWER for normal and emergency needs

MAXIMUM CAPACITY with minimum size and space

LOW COSTS of operation and maintenance

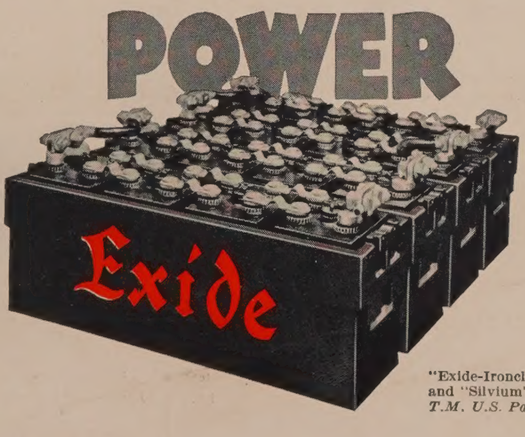
LOW DEPRECIATION—exceptionally long life

HERE'S WHY YOU GET MORE WITH EXIDE-IRONCLAD

Positive plate containing corrosion-resistant Silvium is different . . . unique . . . exclusive! No other type of positive plate can offer you the advantages of the Exide-Ironclad with its slotted tubes, permanently sealed with the new polyethylene bottom bar. More active material is exposed to the electrolyte . . . greater power. More active material is retained . . . providing higher battery capacity for a longer working life.

Other features include improved negative plates, new sealing compound, shock-proof molded container, unbreakable plastic vent plugs. Types, sizes and capacities for all marine battery needs.

EXIDE-IRONCLAD IS YOUR BEST BATTERY BUY . . . AT ANY PRICE



THE ELECTRIC STORAGE BATTERY COMPANY
Philadelphia 2
LOS ANGELES, CAL. SEATTLE, WASH. SAN FRANCISCO, CAL.
Exide Batteries of Canada, Limited, Toronto
1888 . . . DEPENDABLE BATTERIES FOR 66 YEARS . . . 1954

"Exide-Ironclad" and "Silvium" *Reg. T.M. U.S. Pat. Off.*

FIBREBOARD *Cartons*

PRECISION ENGINEERED
for modern high-speed machine packing

CUSTOM DESIGNED
for modern self-service merchandising

FIBREBOARD engineering, including research, is continually producing packages geared to the ever-increasing tempo of modern machine packing. FIBREBOARD designing is creating packages to meet the challenge of today's marketing ...to make your product "stand out."

FIBREBOARD PRODUCTS INC.

16 plants on the Pacific Coast

FIBREBOARD PRODUCTS INC.

Home Office: 1789 Montgomery Street • San Francisco 11

Sales Offices: Baltimore • Boise • Denver • Fresno • Los Angeles • New York • Oakland • Philadelphia
Phoenix • Portland • Sacramento • Salem • Salt Lake City • San Diego • San Francisco • San Jose • Seattle • Stockton • Yakima